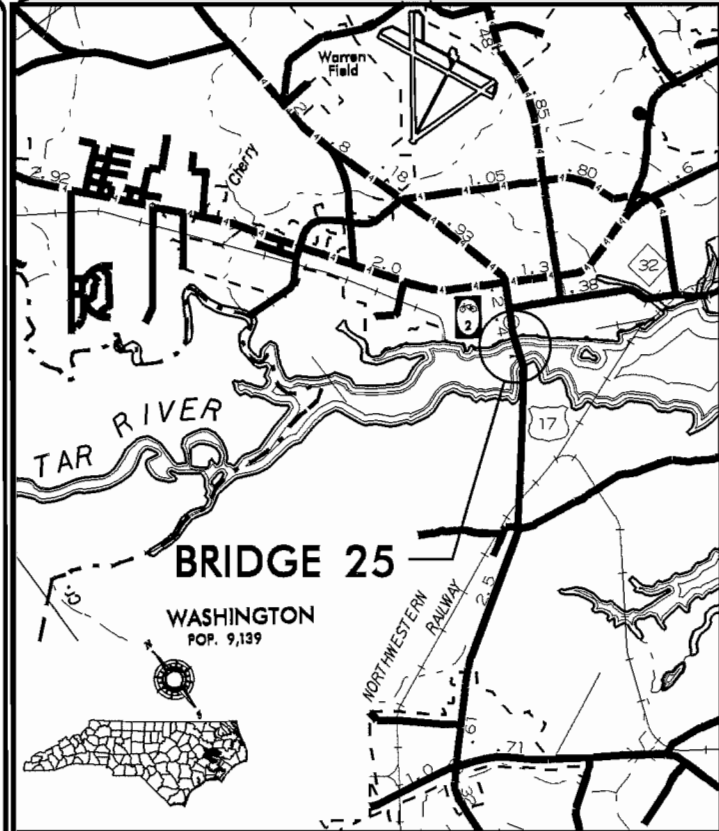


**PROJECT: 17BP.2.P.12**

**CONTRACT: DB00086**



**VICINITY MAP**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BEAUFORT COUNTY**

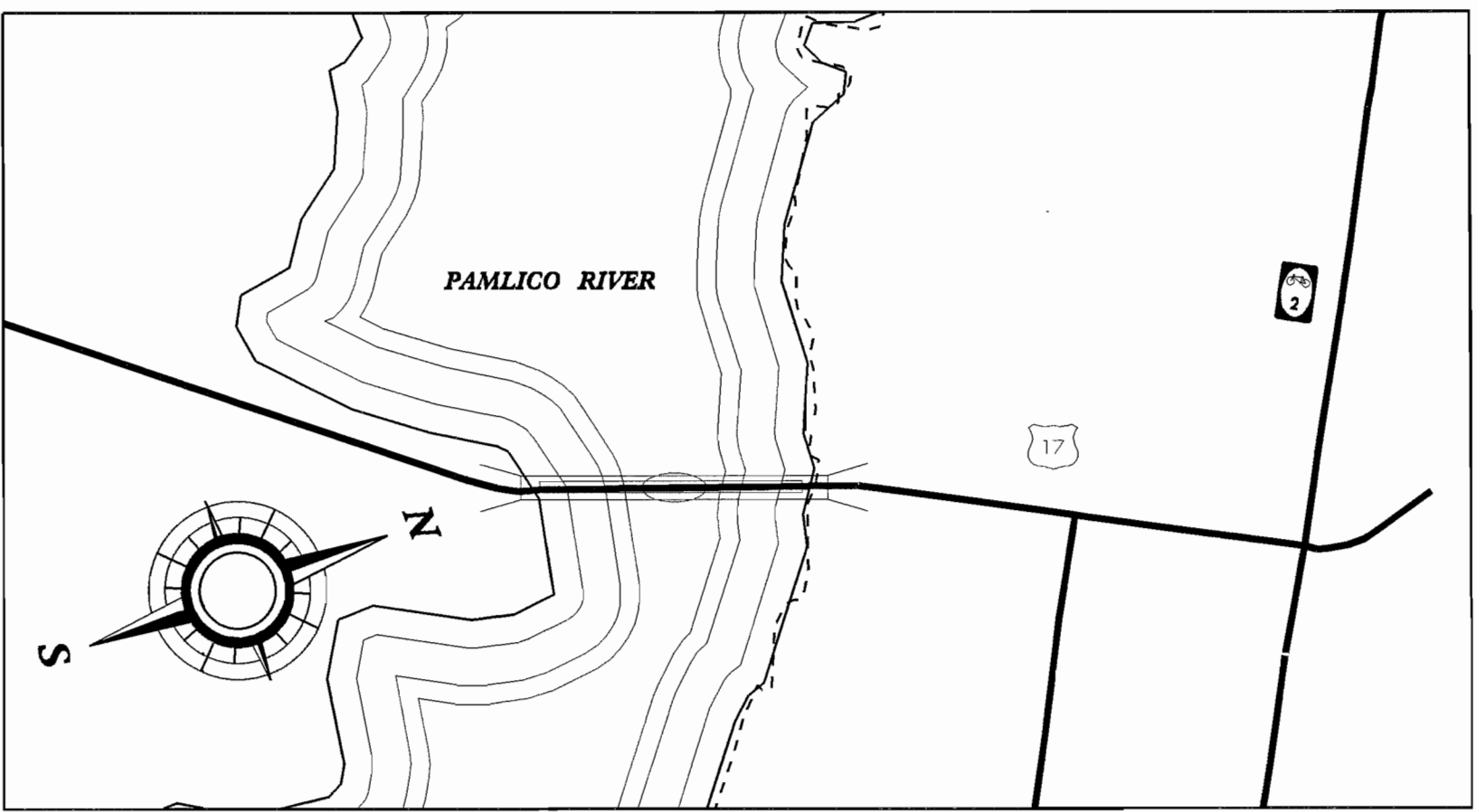
**LOCATION: BRIDGE #25, ON US17 ACROSS PAMLICO RIVER**

**TYPE OF WORK: BRIDGE PRESERVATION, CLEANING & PAINTING OF EXISTING BRIDGE,  
REPAIRS TO SUPERSTRUCTURE, CONCRETE REPAIRS & SHOTCRETE REPAIRS.**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.2.P.12	1	25
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
17BP.2.P.12		P.E.	
17BP.2.P.12		CONST.	

**INDEX OF SHEETS**

DESCRIPTION	SHEET NUMBER
TITLE SHEETS	1
STRUCTURE SHEETS	S-1 THRU S-12
TRAFFIC CONTROL PLANS	TMP-1 THRU TMP-11

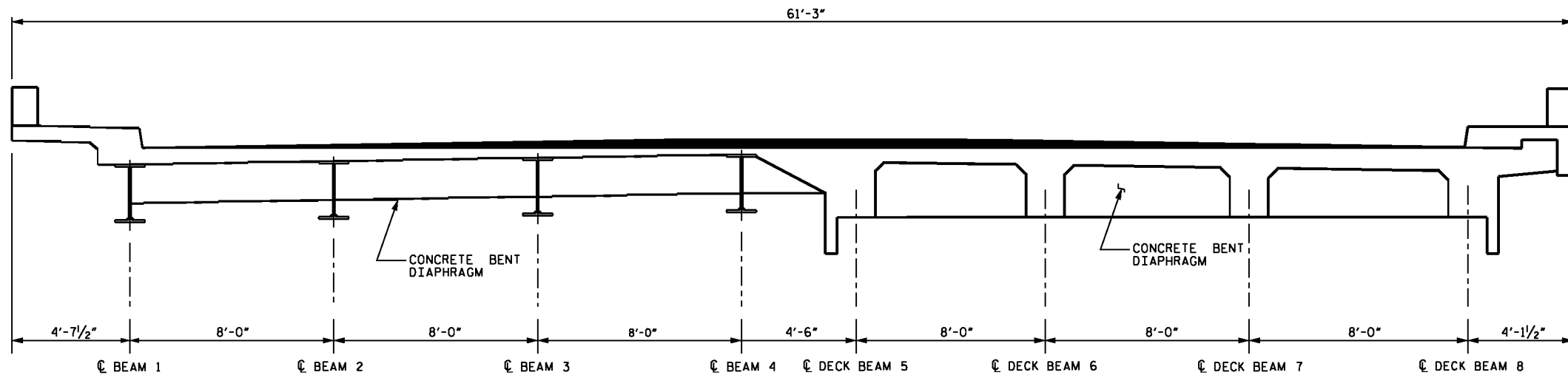


**DESIGN DATA**  
BEAUFORT #25 :  
ADT 2009 = 18000

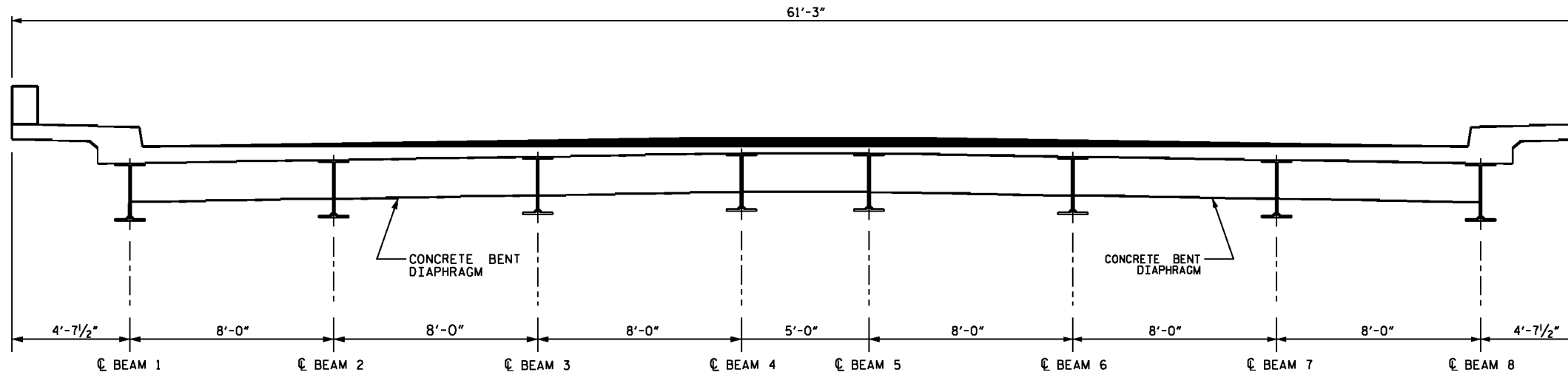
**PROJECT LENGTH**  
BRIDGE BEAUFORT #25 = .232 MILE

Prepared In the Office of:  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
STRUCTURES MANAGEMENT UNIT - PRESERVATION & REPAIR GROUP  
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610  
**RICK NELSON, P.E.**  
  
2012 STANDARD SPECIFICATIONS  
  
LETTING DATE:  
AUGUST 22, 2012

**DANIEL MULLER, P.E.**  
PROJECT DESIGN ENGINEER  
8/1/2012



TYPICAL SECTION  
SPANS 1 - 21 AND 27 -34



TYPICAL SECTION  
SPANS 22 AND 26

JACKING NOTES:

THE CONTRACTOR SHALL SUBMIT JACKING PLANS AND CALCULATIONS FOR REVIEW AND APPROVAL PRIOR TO MATERIAL PURCHASE OR FABRICATION OF THE JACKING SYSTEM.

BEFORE THE JACKING OPERATION BEGINS, THE ONE BAR METAL RAIL SHALL BE DISCONNECTED IN ORDER TO AVOID DAMAGE TO THE RAILING SYSTEM.

EXCEPT AT BENT 21, THE CONTRACTOR MAY ELECT TO JACK ONLY THE THE OUTSIDE GIRDERS PROVIDED THE NUTS ON THE REST OF THE STEEL GIRDERS AT THE BENT ARE LOOSENED TO PREVENT DAMAGE TO THE CONCRETE DECK.

AT BENT 21, THE CONTRACTOR SHALL JACK ALL GIRDERS ALONG THE BEARING LINE SIMULTANEOUSLY. JACKING HEIGHT SHOULD BE LIMITED TO THAT REQUIRED TO CLEAR THE BEARINGS IN ORDER TO PREVENT DAMAGE AT THE DIAPHRAGM AT BENT 22.

THE EXISTING CONDITION OF THE CONCRETE CAP AND CONCRETE DIAPHRAGM AT BENT #21 IS SUCH THAT JACKING FROM ABOVE UTILIZING A CARRIER BEAM TYPE FRAME MAY BE THE BEST POSSIBLE METHOD. A BRIDGE CLOSURE PERIOD HAS BEEN PROVIDED SPECIFICALLY FOR THIS REPAIR. SEE THE TRAFFIC MANAGEMENT PLANS.

ALL JACKING SHALL BE ACCOMPLISHED BY MEANS OF A DUAL-FLOW PRESSURIZED PUMP CONTROLLING THE JACKS.

THE SPAN SHALL BE LIFTED ENOUGH THAT THE BEAMS CLEAR THE BEARINGS AND ALL LOAD IS SUPPORTED BY THE JACKS. AFTER JACKING IS COMPLETE THE CONTRACTOR SHALL PROVIDE A METHOD TO SUPPORT THE SPAN FOR DEAD AND LIVE LOADS AND REMOVE THE JACKS DURING BEAM REPAIR OR IF JACKS REMAIN IN PLACE DURING THE ENTIRE JACKING AND REPAIR OPERATION IT SHALL HAVE MECHANICAL LOCK OFF CAPABILITIES.

IF DURING THE JACKING PROCESS OR WHILE THE SPAN IS BEING SUPPORTED THE BEAMS SHIFT FROM THEIR ORIGINAL POSITION, ALL WORK WILL CEASE AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

PRIOR TO JACKING, THE CONTRACTOR SHALL ENSURE THERE ARE NO OBSTACLES PREVENTING THE SPAN FROM BEING LIFTED.

ALL ADJACENT BEARINGS OF BEAMS NOT BEING JACKED MAY BE LOOSEN TO DECREASE THE RESISTANCE OF THE DECK SLAB DURING JACKING. ALL BEARINGS LOOSEN SHALL BE TIGHTEN BACK AFTER THE BEAMS ARE REPAIRED AND THE JACKS AND BLOCKING HAVE BEEN REMOVED.

PAYMENT OF INDIVIDUAL BEAM JACKING WILL BE MADE AT THE UNIT PRICE BID FOR BEAM JACKING. SUCH PRICE WILL BE FULL COMPENSATION FOR ALL MATERIALS, EQUIPMENT, TOOLS, LABOR, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AT EACH JACKING LOCATION.

PAYMENT OF SPAN BEAM JACKING AT BENT #21 WILL BE MADE AT THE LUMP SUM PRICE BID FOR SPAN JACKING. SUCH PRICE WILL BE FULL COMPENSATION FOR ALL MATERIALS, EQUIPMENT, TOOLS, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

SERVICE REACTIONS PER BEARING	
DEAD LOAD:	19.0 KIPS
LIVE LOAD + IMPACT:	47.0 KIPS
TOTAL:	66.0 KIPS

NOTE: JACKS SHALL HAVE A MINIMUM SAFE LOAD OF 125% OF THE SERVICE LOADS SPECIFIED.

GENERAL NOTES:

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COST RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR THIS PROJECT.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL OSHA AND STATE SAFETY REQUIREMENTS.

DIMENSIONS IN THESE PLANS ARE BASED ON ORIGINAL PLANS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO STARTING WORK.

EXISTING BRIDGE AND REPAIR DETAILS INDICATED ON THE PLANS ARE FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE AND REPAIR DETAILS SHOWN ON THE PLANS AND THE ACTUAL CONDITION ON THE SITE.

WORK ON THIS BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION ACCESS IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

ALL VISUAL AND NON-DESTRUCTIVE TESTING WILL BE PERFORMED BY NCDOT.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR HANDLING OF BRIDGE WASH WATER, SEE SPECIAL PROVISIONS.

FOR PAINTING OF EXISTING STRUCTURES, SEE SPECIAL PROVISIONS.

PROJECT NO. 17BP.2.P.12  
BEAUFORT COUNTY  
 BRIDGE NO. 25  
 SHEET OF

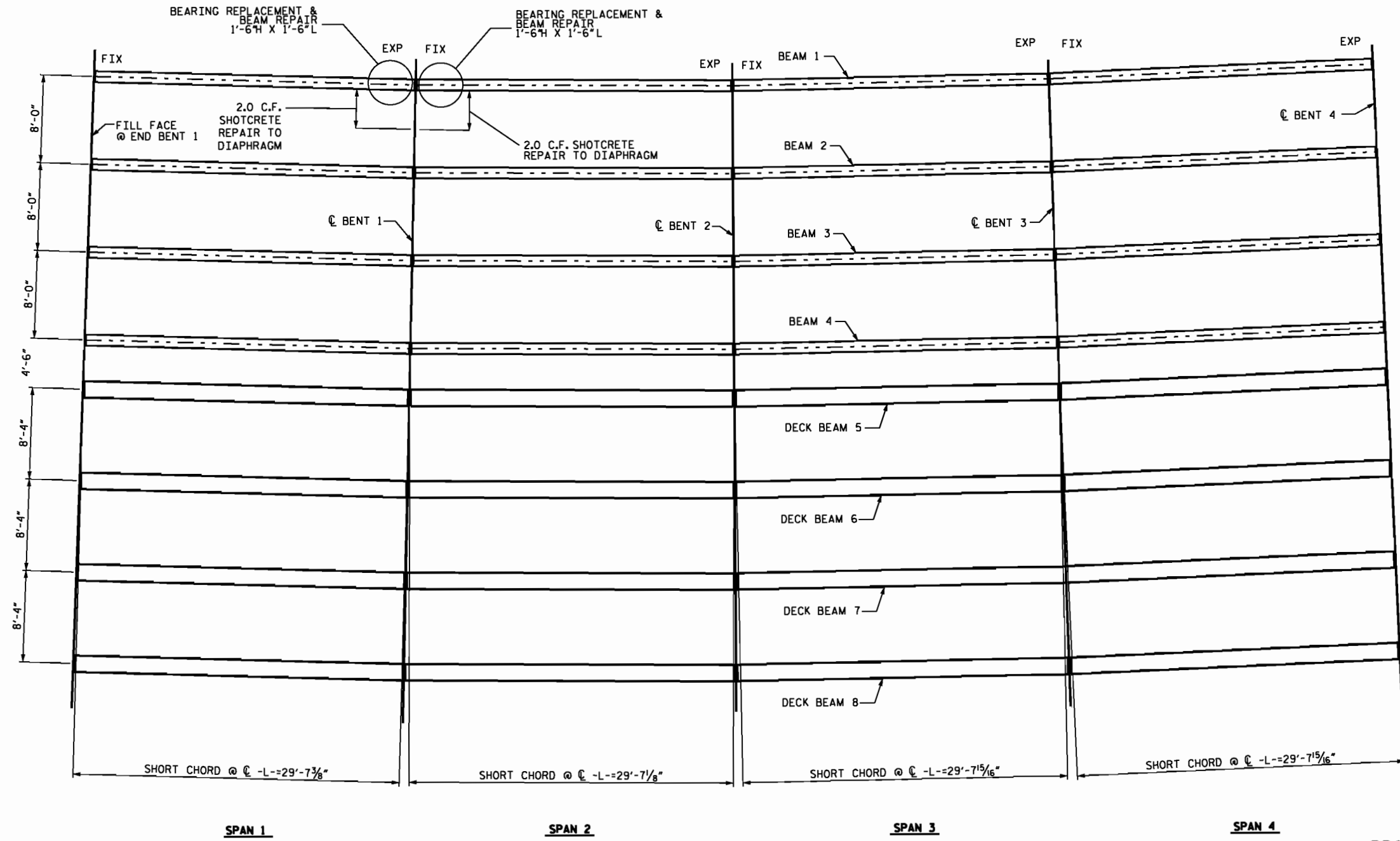
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

TYPICAL SECTION, NOTES AND  
 BILL OF MATERIAL

REVISIONS						SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE	S-1	
1			3			TOTAL SHEETS	
2			4			12	

TOTAL BILL OF MATERIAL								
CLEANING & REPAINTING OF BRIDGE #25	POLLUTION CONTROL	SPAN JACKING BRIDGE #25	BEAM JACKING BRIDGE #25	STRUCTURAL STEEL FOR GIRDER REPAIR BRIDGE #25	BEARING REPLACEMENT	SHOTCRETE REPAIRS	CONCRETE REPAIRS	STRUCTURAL STEEL
LUMP SUM	LUMP SUM	LUMP SUM	EA.	LBS.	EA.	C.F.	C.F.	APPROX. LBS
LUMP SUM	LUMP SUM	LUMP SUM	6	876	10	46	10	552

DRAWN BY : D. MULLER DATE : 7/2012  
 CHECKED BY : P. SROUSE DATE : 7/2012



**FRAMING PLAN**

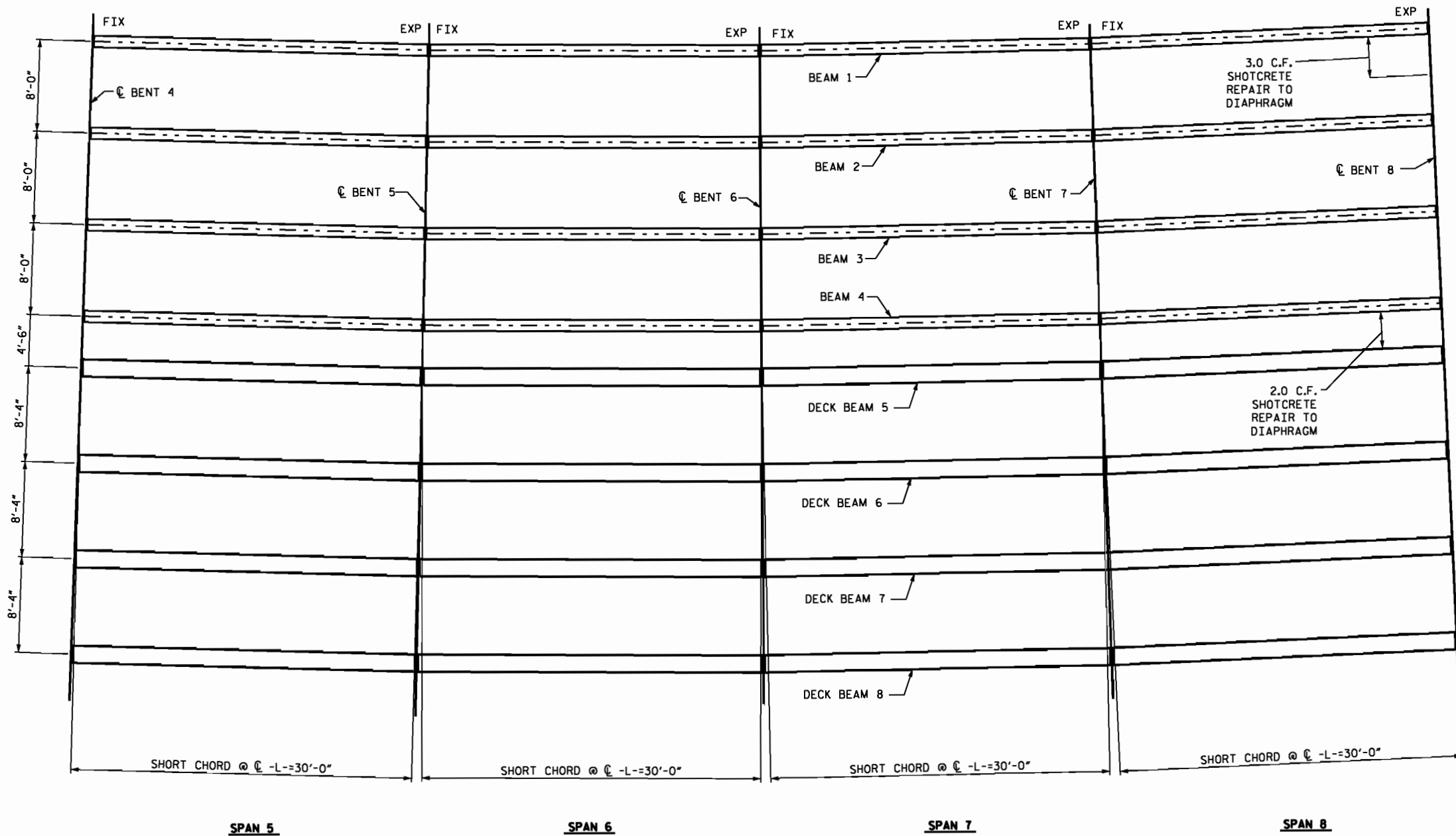
PROJECT NO. 17BP.2.P.12  
BEAUFORT COUNTY  
 BRIDGE NO: 25  
 SHEET    OF   

SUMMARY OF QUANTITIES					
SPANS 1-4					
BEAM END REPAIRS					
BEAM #	SPAN	BENT	H	L	LBS.
1	1	1	1'-6"	1'-6"	85
1	2	1	1'-6"	1'-6"	85
TOTAL WEIGHT					170
# OF BEARING REPLACEMENTS					2
TOTAL SHOTCRETE REPAIR					4 CF
DRAWN BY : <u>D. MULLER</u> DATE : <u>7/2012</u>					
CHECKED BY : <u>P. SPROUSE</u> DATE : <u>7/2012</u>					

NOTES:  
 THE LOCATION AND EXTENT OF REPAIRS SHOWN ON THE PLANS ARE GENERAL IN NATURE, THE ENGINEER WILL DETERMINE THE EXACT EXTENT OF THE REPAIRS IN THE FIELD BASED ON AN EVALUATION OF THE EXPOSED SURFACES.  
 SEE SHEET S-9 FOR STEEL BEAM END REPAIR DETAILS.  
 SEE SHEET S-12 FOR TYPICAL SHOTCRETE REPAIRS TO CONCRETE DIAPHRAGMS.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PARTIAL FRAMING PLAN & REPAIRS TO SUPERSTRUCTURE (SPANS 1-4)					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET NO.	S-2
TOTAL SHEETS	12



**FRAMING PLAN**

PROJECT NO. 17BP.2.P.12  
BEAUFORT COUNTY  
 BRIDGE NO. 25  
 SHEET    OF   

**SUMMARY OF QUANTITIES**

SPANS 5-8					
BEAM END REPAIRS					
BEAM #	SPAN	BENT	H	L	LBS.
TOTAL WEIGHT					0
* OF BEARING REPLACEMENTS					0
TOTAL SHOTCRETE REPAIR					5 C.F.

**NOTES:**

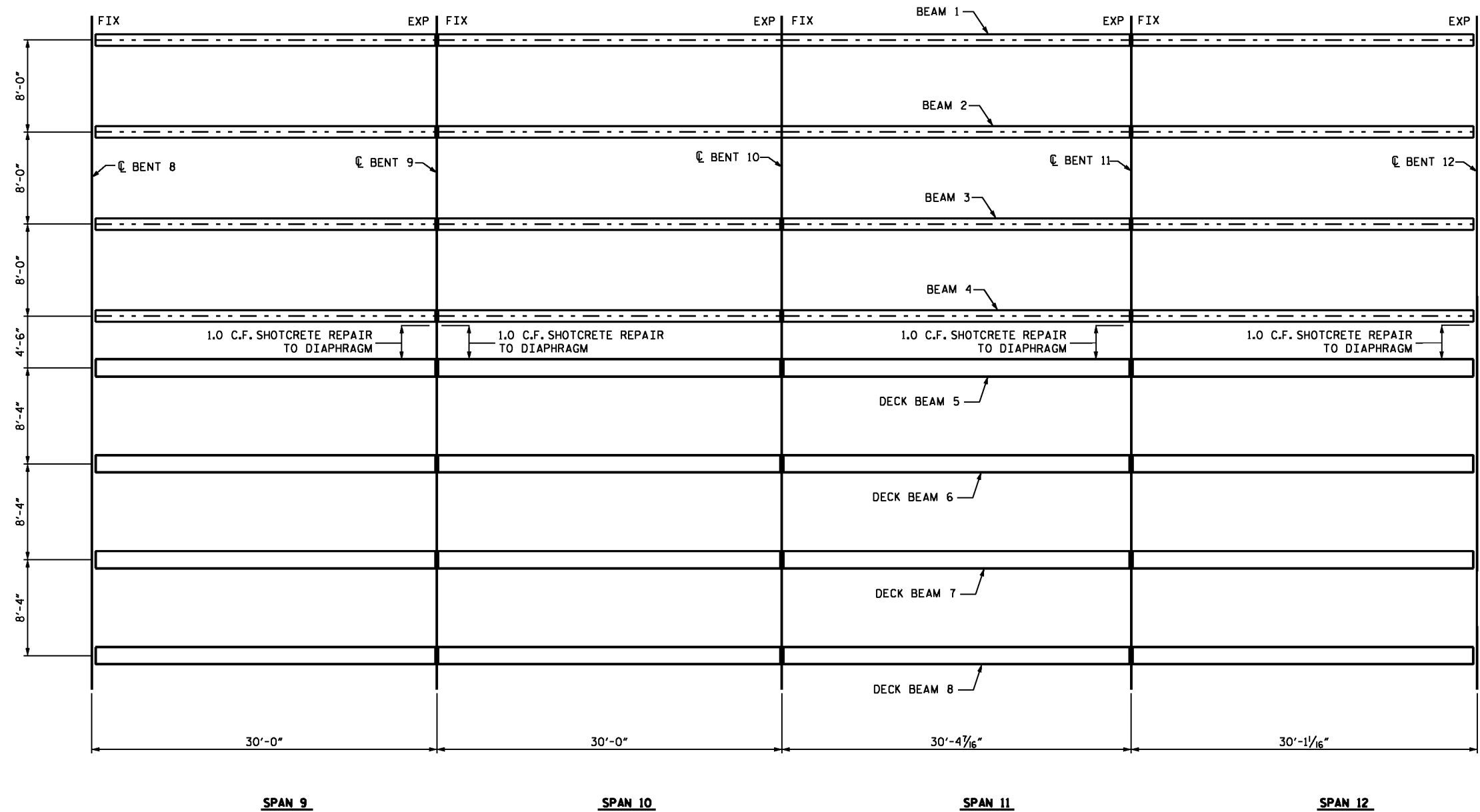
THE LOCATION AND EXTENT OF REPAIRS SHOWN ON THE PLANS ARE GENERAL IN NATURE, THE ENGINEER WILL DETERMINE THE EXACT EXTENT OF THE REPAIRS IN THE FIELD BASED ON AN EVALUATION OF THE EXPOSED SURFACES.

SEE SHEET S-9 FOR STEEL BEAM END REPAIR DETAILS.

SEE SHEET S-12 FOR TYPICAL SHOTCRETE REPAIRS TO CONCRETE DIAPHRAGMS.

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**PARTIAL FRAMING  
 PLAN & REPAIRS TO  
 SUPERSTRUCTURE  
 (SPANS 5-8)**

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-3
1			3			TOTAL SHEETS
2			4			12



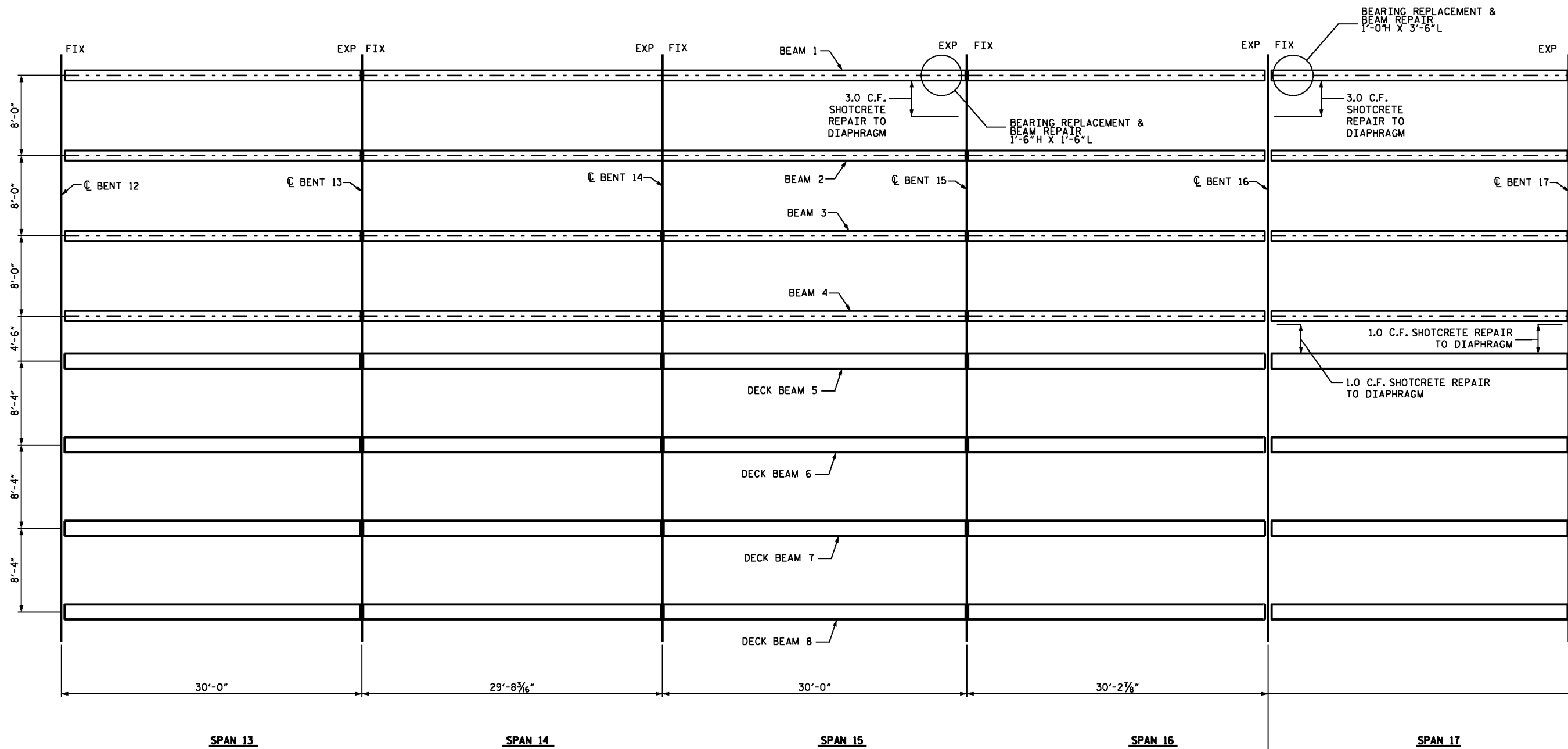
**FRAMING PLAN**

PROJECT NO. 17BP.2.P.12  
BEAUFORT COUNTY  
 BRIDGE NO. 25  
 SHEET    OF   

SUMMARY OF QUANTITIES					
SPANS 9-12					
BEAM END REPAIRS					
BEAM	SPAN	BENT	H	L	LBS.
TOTAL WEIGHT					0
# OF BEARING REPLACEMENTS					0
TOTAL SHOTCRETE REPAIR					4 CF
DRAWN BY : <u>D. MULLER</u>		DATE : <u>7/2012</u>			
CHECKED BY : <u>P. SPROUSE</u>		DATE : <u>7/2012</u>			

NOTES:  
 THE LOCATION AND EXTENT OF REPAIRS SHOWN ON THE PLANS ARE GENERAL IN NATURE, THE ENGINEER WILL DETERMINE THE EXACT EXTENT OF THE REPAIRS IN THE FIELD BASED ON AN EVALUATION OF THE EXPOSED SURFACES.  
 SEE SHEET S-9 FOR STEEL BEAM END REPAIR DETAILS.  
 SEE SHEET S-12 FOR TYPICAL SHOTCRETE REPAIRS TO CONCRETE DIAPHRAGMS.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PARTIAL FRAMING PLAN & REPAIRS TO SUPERSTRUCTURE (SPANS 9-12)					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
SHEET NO.					S-4
TOTAL SHEETS					12



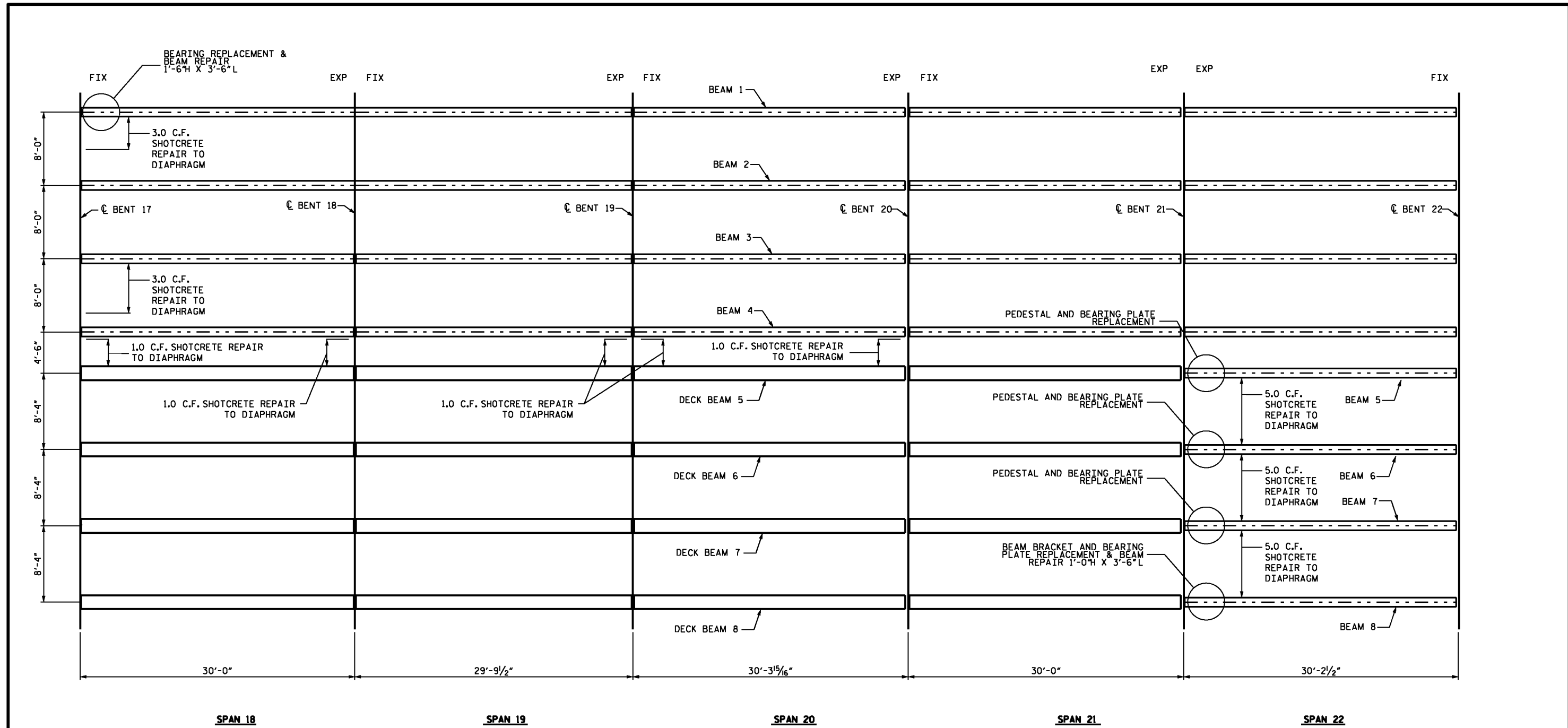
**FRAMING PLAN**

PROJECT NO. 17BP.2.P.12  
BEAUFORT COUNTY  
 BRIDGE NO. 25  
 SHEET    OF   

NOTES:  
 THE LOCATION AND EXTENT OF REPAIRS SHOWN ON THE PLANS ARE GENERAL IN NATURE, THE ENGINEER WILL DETERMINE THE EXACT EXTENT OF THE REPAIRS IN THE FIELD BASED ON AN EVALUATION OF THE EXPOSED SURFACES.  
 SEE SHEET S-9 FOR STEEL BEAM END REPAIR DETAILS.  
 SEE SHEET S-12 FOR TYPICAL SHOTCRETE REPAIRS TO CONCRETE DIAPHRAGMS.

SUMMARY OF QUANTITIES					
SPANS 13-17					
BEAM END REPAIRS					
BEAM #	SPAN	BENT	H	L	LBS.
1	15	15	1'-6"	1'-6"	85
1	17	16	1'-0"	3'-0"	135
TOTAL WEIGHT					220
# OF BEARING REPLACEMENTS					2
TOTAL SHOTCRETE REPAIR					8 CF
DRAWN BY : <u>D. MULLER</u>			DATE : <u>7/2012</u>		
CHECKED BY : <u>P. SPROUSE</u>			DATE : <u>7/2012</u>		

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PARTIAL FRAMING PLAN & REPAIRS TO SUPERSTRUCTURE (SPANS 13-17)					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
SHEET NO.					S-5
TOTAL SHEETS					12



SPAN 18

SPAN 19

SPAN 20

SPAN 21

SPAN 22

**FRAMING PLAN**

SUMMARY OF QUANTITIES					
SPANS 18-22					
BEAM END REPAIRS					
BEAM #	SPAN	BENT	H	L	LBS.
1	18	17	1'-6"	3'-6"	193
8	22	21	1'-0"	3'-6"	158
TOTAL WEIGHT					351
# OF BEARING REPLACEMENTS					5
# OF PEDESTAL REPLACEMENTS					3
# OF BRACKET REPLACEMENTS					1
TOTAL SHOTCRETE REPAIR					26 CF
DRAWN BY : D. MULLER DATE : 7/2012					
CHECKED BY : P. SPROUSE DATE : 7/2012					

NOTES:

THE LOCATION AND EXTENT OF REPAIRS SHOWN ON THE PLANS ARE GENERAL IN NATURE, THE ENGINEER WILL DETERMINE THE EXACT EXTENT OF THE REPAIRS IN THE FIELD BASED ON AN EVALUATION OF THE EXPOSED SURFACES.

SEE SHEET S-9 FOR STEEL BEAM END REPAIR DETAILS.

SEE SHEET S-12 FOR TYPICAL SHOTCRETE REPAIRS TO CONCRETE DIAPHRAGMS.

PROJECT NO. 17BP.2.P.12  
BEAUFORT COUNTY  
 BRIDGE NO. 25

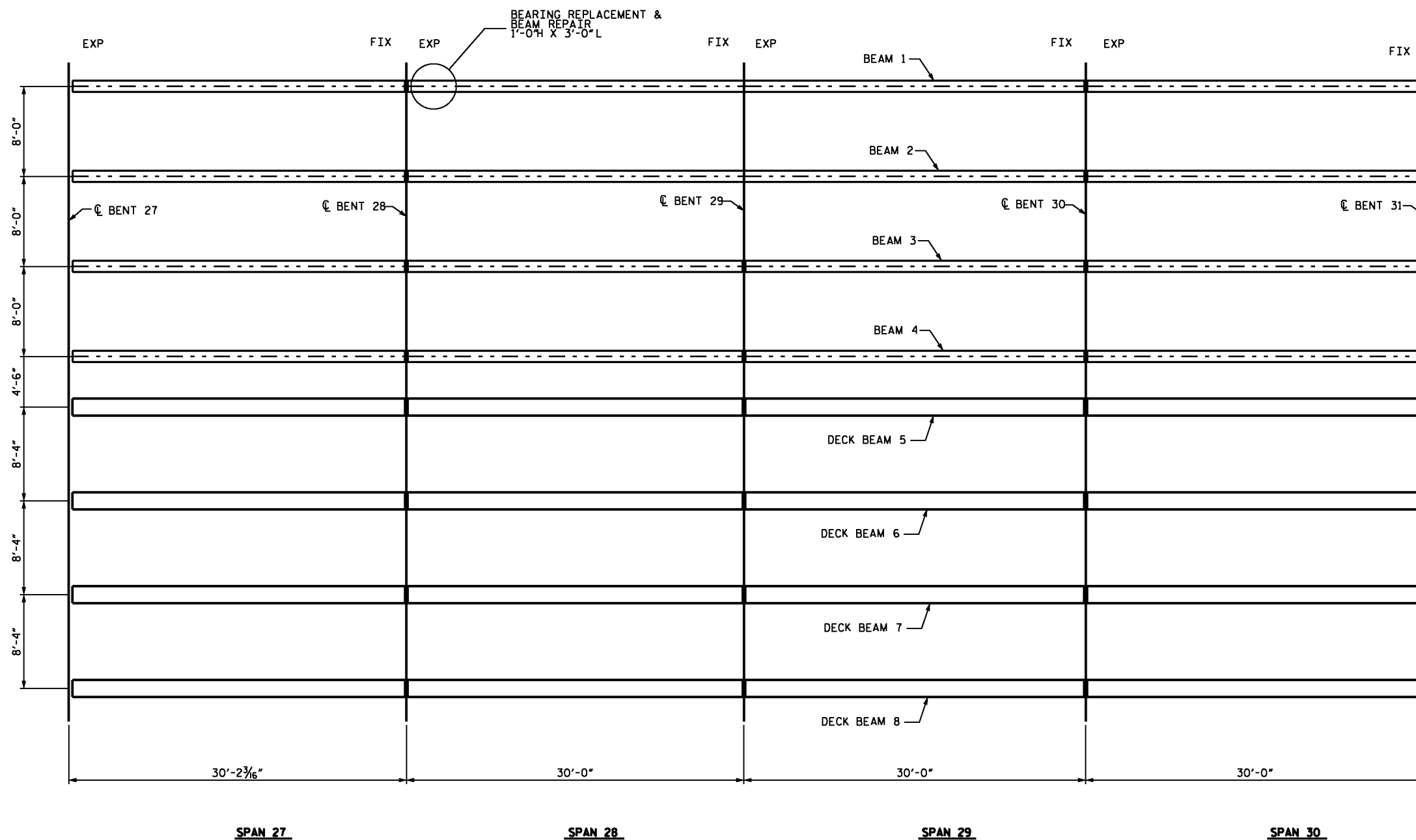
SHEET    OF   

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**PARTIAL FRAMING  
 PLAN & REPAIRS TO  
 SUPERSTRUCTURE  
 (SPANS 18-22)**

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET NO. S-6  
 TOTAL SHEETS 12



SPAN 23 THROUGH SPAN 26  
NOT SHOWN. NO STEEL  
REPAIRS REQUIRED.  
FOR PAINTING  
REQUIREMENTS, SEE  
SPECIAL PROVISIONS

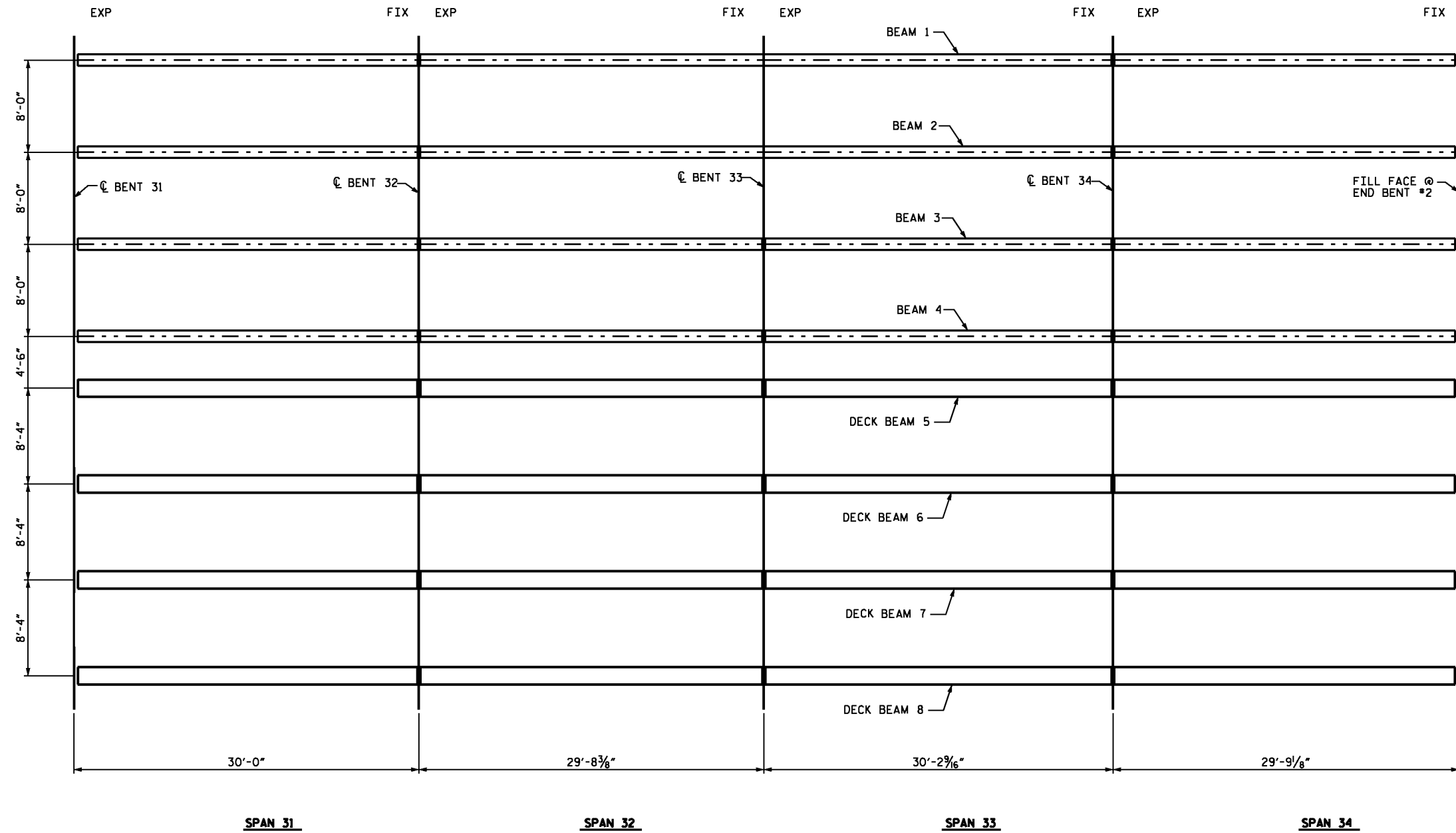
PROJECT NO. 17BP.2.P.12  
BEAUFORT COUNTY  
 BRIDGE NO. 25  
 SHEET    OF   

SUMMARY OF QUANTITIES					
SPANS 27-30					
BEAM END REPAIRS					
BEAM #	SPAN	BENT	H	L	LBS.
1	28	28	1'-0"	3'-0"	135
1					
TOTAL WEIGHT					135
* OF BEARING REPLACEMENTS					1
TOTAL SHOTCRETE REPAIR					0 CF
DRAWN BY : <u>D. MULLER</u> DATE : <u>7/2012</u>					
CHECKED BY : <u>P. SPROUSE</u> DATE : <u>7/2012</u>					

NOTES:  
 THE LOCATION AND EXTENT OF REPAIRS SHOWN ON THE PLANS ARE GENERAL IN NATURE, THE ENGINEER WILL DETERMINE THE EXACT EXTENT OF THE REPAIRS IN THE FIELD BASED ON AN EVALUATION OF THE EXPOSED SURFACES.  
 SEE SHEET S-9 FOR STEEL BEAM END REPAIR DETAILS.  
 SEE SHEET S-12 FOR TYPICAL SHOTCRETE REPAIRS TO CONCRETE DIAPHRAGMS.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
<b>PARTIAL FRAMING PLAN &amp; REPAIRS TO SUPERSTRUCTURE (SPANS 27-30)</b>					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
SHEET NO.					S-7
TOTAL SHEETS					12





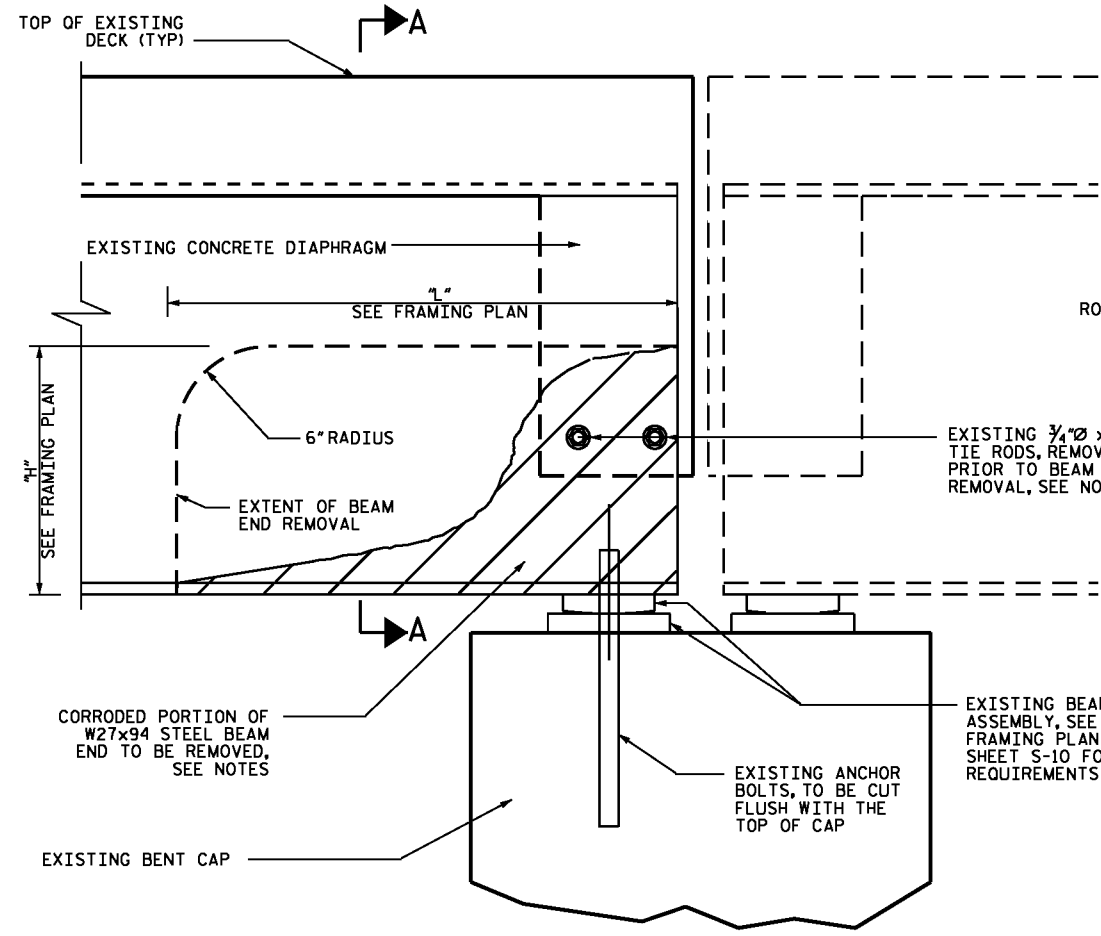
**FRAMING PLAN**

PROJECT NO. 17BP.2.P.12  
BEAUFORT COUNTY  
 BRIDGE NO. 25  
 SHEET    OF   

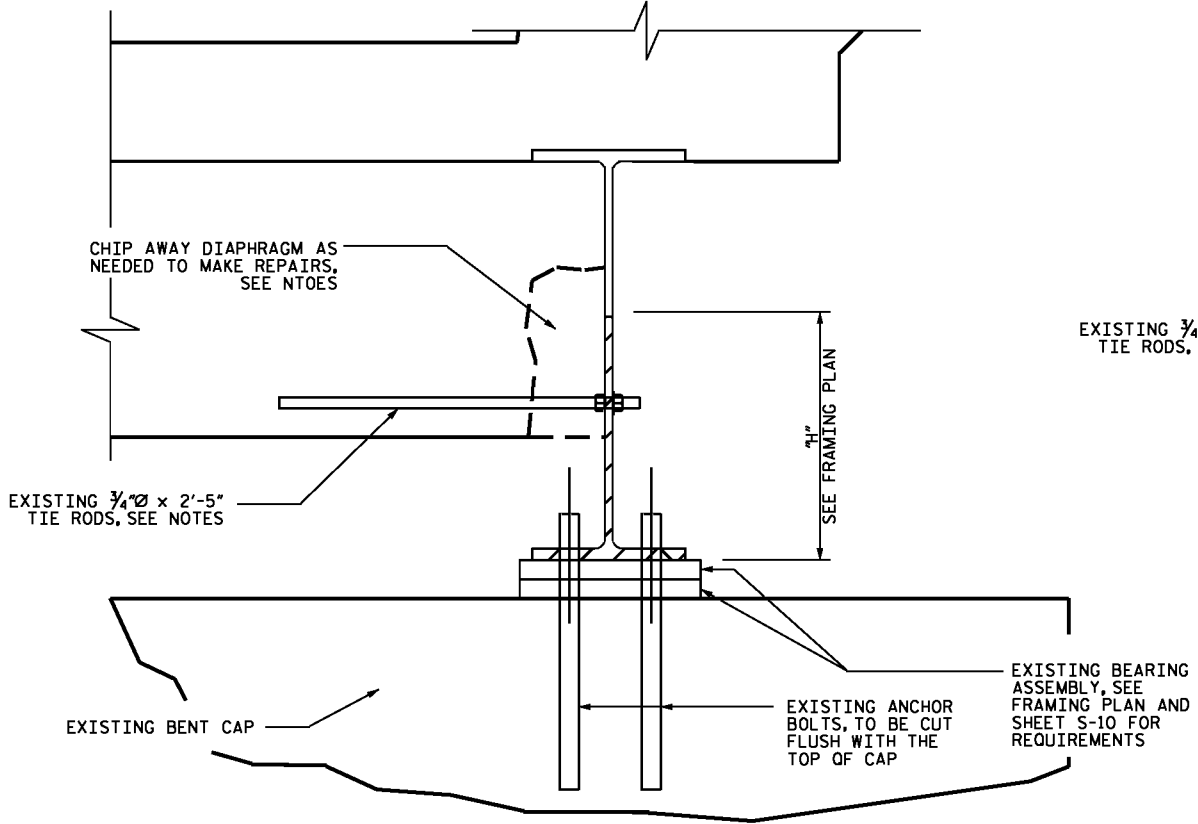
NOTES:  
 THE LOCATION AND EXTENT OF REPAIRS SHOWN ON THE PLANS ARE GENERAL IN NATURE, THE ENGINEER WILL DETERMINE THE EXACT EXTENT OF THE REPAIRS IN THE FIELD BASED ON AN EVALUATION OF THE EXPOSED SURFACES.  
 SEE SHEET S-9 FOR STEEL BEAM END REPAIR DETAILS.  
 SEE SHEET S-12 FOR TYPICAL SHOTCRETE REPAIRS TO CONCRETE DIAPHRAGMS.

SUMMARY OF QUANTITIES					
SPANS 31-34					
BEAM END REPAIRS					
BEAM #	SPAN	BENT	H	L	LBS.
TOTAL WEIGHT					0
# OF BEARING REPLACEMENTS					0
TOTAL SHOTCRETE REPAIR					0 CF
DRAWN BY : <u>D. MULLER</u> DATE : <u>7/2012</u>					
CHECKED BY : <u>P. SPROUSE</u> DATE : <u>7/2012</u>					

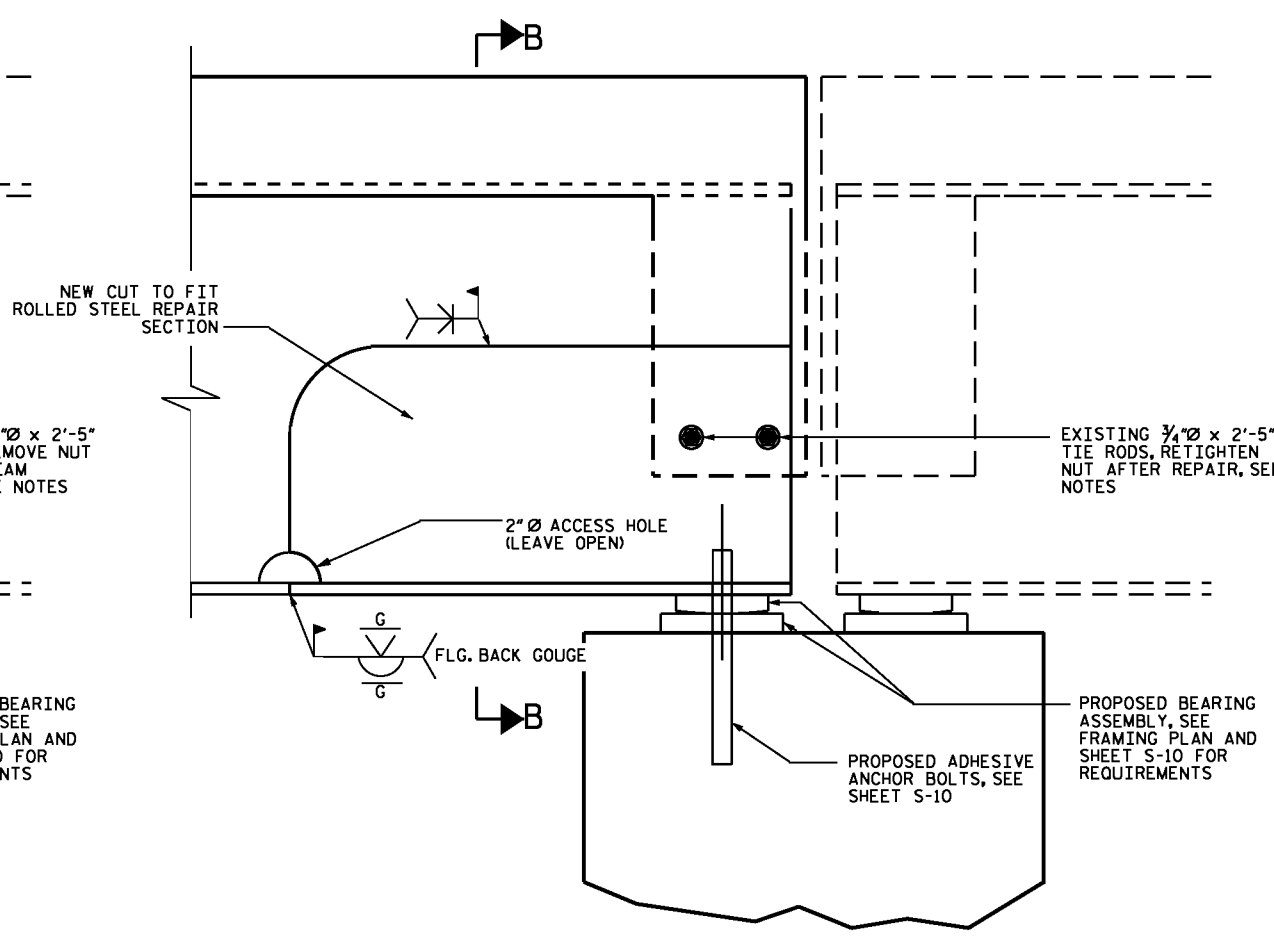
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PARTIAL FRAMING PLAN & REPAIRS TO SUPERSTRUCTURE (SPANS 31-34)					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
SHEET NO.					S-8
TOTAL SHEETS					12



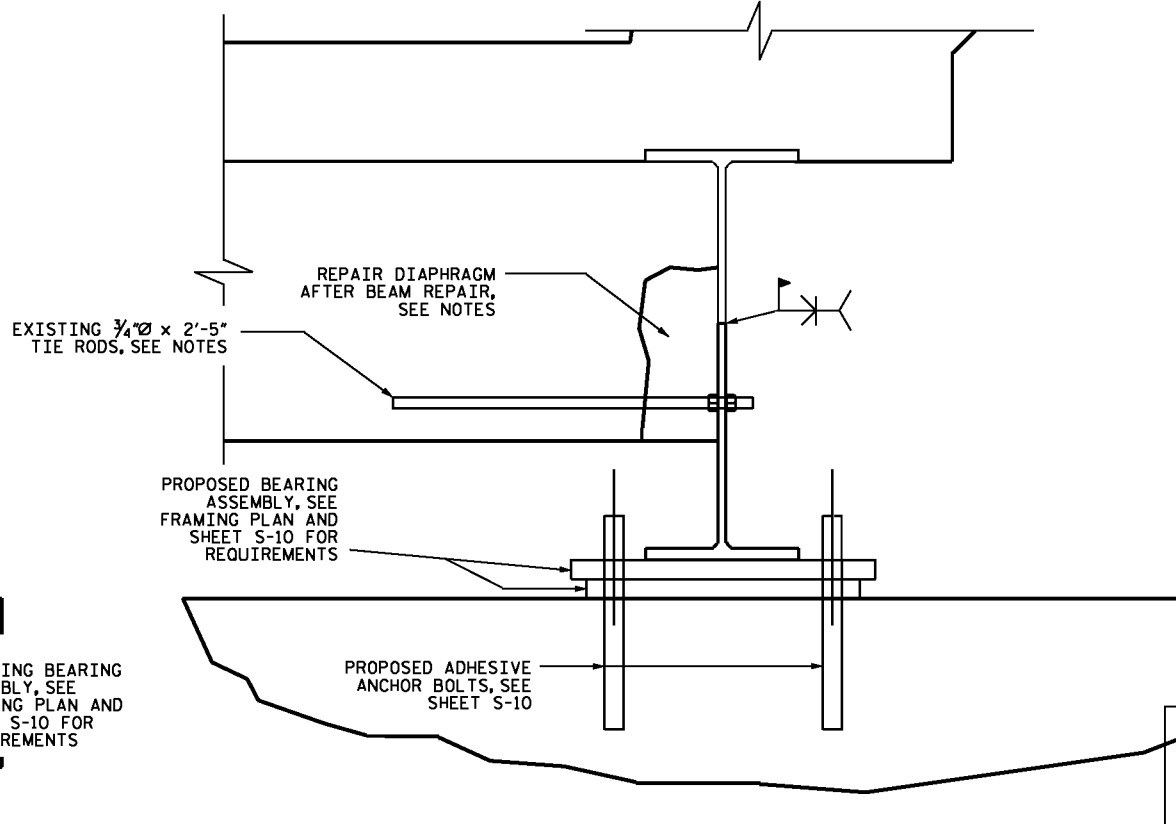
EXISTING



SECTION A-A



PROPOSED



SECTION B-B

REPAIR SEQUENCE:

GIRDER REPAIR DETAILS AND DIMENSIONS PROVIDED IN PLANS MAY BE MODIFIED BASED ON FIELD CONDITIONS BY THE ENGINEER.

SECTION LOSS AND FINAL EXTENT OF REQUIRED REPAIR (H  $\times$  L) IS TO BE VERIFIED IN THE FIELD BY THE ENGINEER.

CHIP AWAY CONCRETE FROM BENT DIAPHRAGMS AS NEEDED TO DETERMINE LIMITS OF REPAIR. MECHANICALLY CLEAN RUST, SCALE & EXISTING PAINT TO AT LEAST 4" BEYOND REPAIR AREA LIMITS.

DETERMINE CUT-TO-FIT STEEL SECTION NEEDED TO REPAIR SECTION LOSS.

REPLACEMENT BEAM SECTION SHALL BE CUT FROM A W 27 X 94 ROLLED BEAM AND SHALL BE AASHTO M270 GRADE 36, OR APPROVED EQUIVALENT.

INSTALL CUT-TO-FIT SECTION, FULLY WELD ALONG TOP AND SIDES OF PLATE.

IN ACCORDANCE WITH THE SPECIAL PROVISIONS, AFTER REPAIR GRIND ALL WELDS FLUSH, THOROUGHLY CLEAN AREA TO REMOVE DEBRIS AND OILS FROM REPAIR PROCESS, CLEAN AND PAINT STRUCTURAL STEEL.

ALL WELDS WILL BE INSPECTED AND TESTED BY THE NCDOT MATERIALS AND TEST UNIT IN ACCORDANCE WITH THE CURRENT AWS BRIDGE WELDING CODE AND STANDARD SPECIFICATIONS.

AFTER GIRDERS ARE REPAIRED AND PAINTED THE PORTION OF THE CONCRETE REMOVED FROM THE BENT DIAPHRAGMS SHALL BE REPAIRED. ANY REINFORCING STEEL CUT DURING THE REMOVAL PROCESS SHALL BE SPLICED WITH A SIMILAR SIZE BAR WITH AT LEAST A ONE FOOT SPLICE TO THE EXISTING STEEL. NO SEPARATE PAYMENT SHALL BE MADE FOR CONCRETE AND REINFORCING STEEL AS THIS IS CONSIDERED INCIDENTAL TO THE PAY ITEM "GIRDER REPAIR".

FOR "GIRDER REPAIR", SEE SPECIAL PROVISIONS.

ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT APPLICABLE AWS AND NCDOT STANDARD SPECIFICATIONS.

FOR JACKING NOTES, SEE SHEET S-1.

PROJECT NO. 17BP.2.P.12  
BEAUFORT COUNTY  
 BRIDGE NO. 25  
 SHEET    OF   

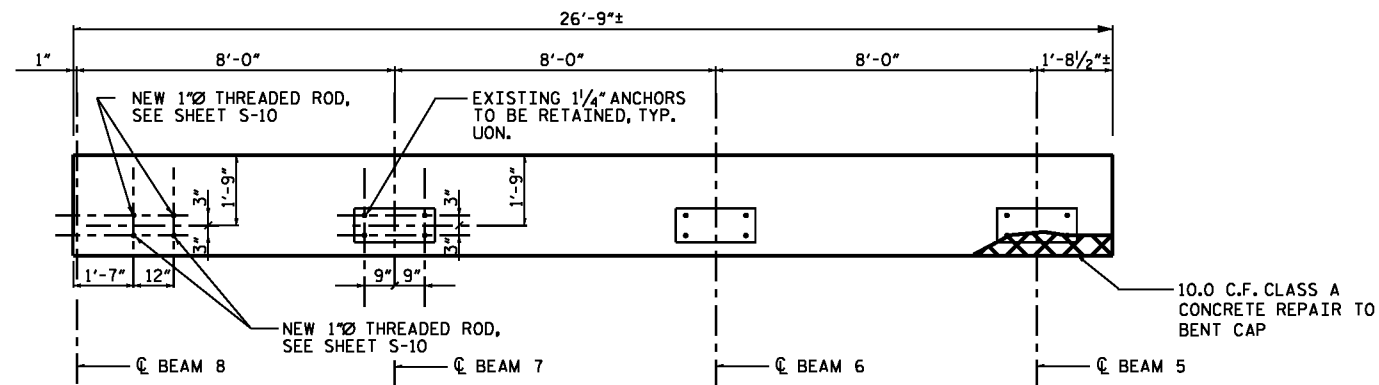
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**STEEL REPAIRS AT BEAM ENDS**

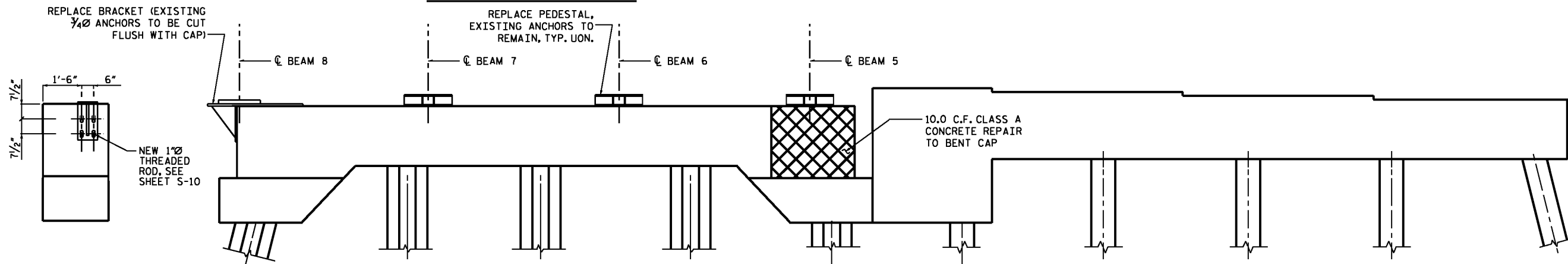
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9	
1			3			TOTAL SHEETS	
2			4			12	

DRAWN BY : D. MULLER DATE : 7/2012  
 CHECKED BY : P. SPROUSE DATE : 7/2012





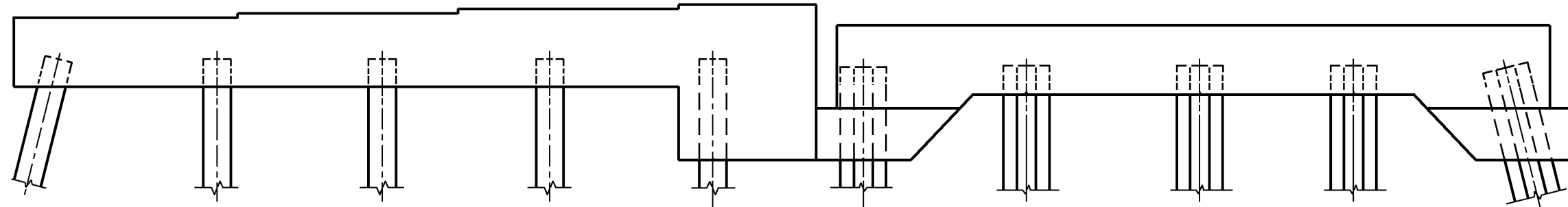
PARTIAL PLAN



WEST END ELEVATION

NORTH ELEVATION

EAST END ELEVATION



SOUTH ELEVATION

**NOTES**

THE LOCATION AND EXTENT OF REPAIRS SHOWN ARE GENERAL IN NATURE. THE ENGINEER WILL DETERMINE THE EXACT EXTENT OF THE REMOVAL BASED ON AN EVALUATION OF THE CONDITION OF THE EXPOSED SURFACES.

CONSTRUCTION METHODS, PROCEDURES, AND SEQUENCES ARE THE CONTRACTOR'S RESPONSIBILITY AND THE CONTRACTOR SHALL TAKE ALL THE NECESSARY MEANS TO MAINTAIN AND PROTECT THE STRUCTURAL INTEGRITY OF ALL CONSTRUCTION AT ALL STAGES.

ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE ENGINEER.

STEEL BEAMS SHALL NOT BE LOWERED ONTO BEARINGS UNTIL CONCRETE REPAIR MATERIAL HAS ACHIEVED STRENGTH.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR TYPICAL CONCRETE REPAIR DETAILS, SEE SHEET S-12.

PROJECT NO. 17BP.2.P.12  
BEAUFORT COUNTY  
 BRIDGE NO. 25

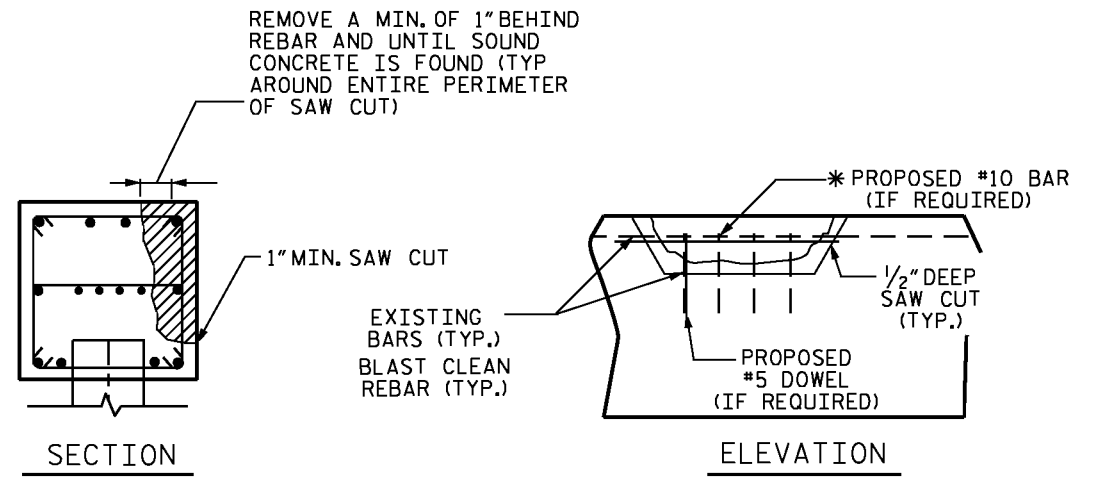
SHEET    OF   

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
REPAIRS AT BENT 21					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
					SHEET NO. S-11
					TOTAL SHEETS 12

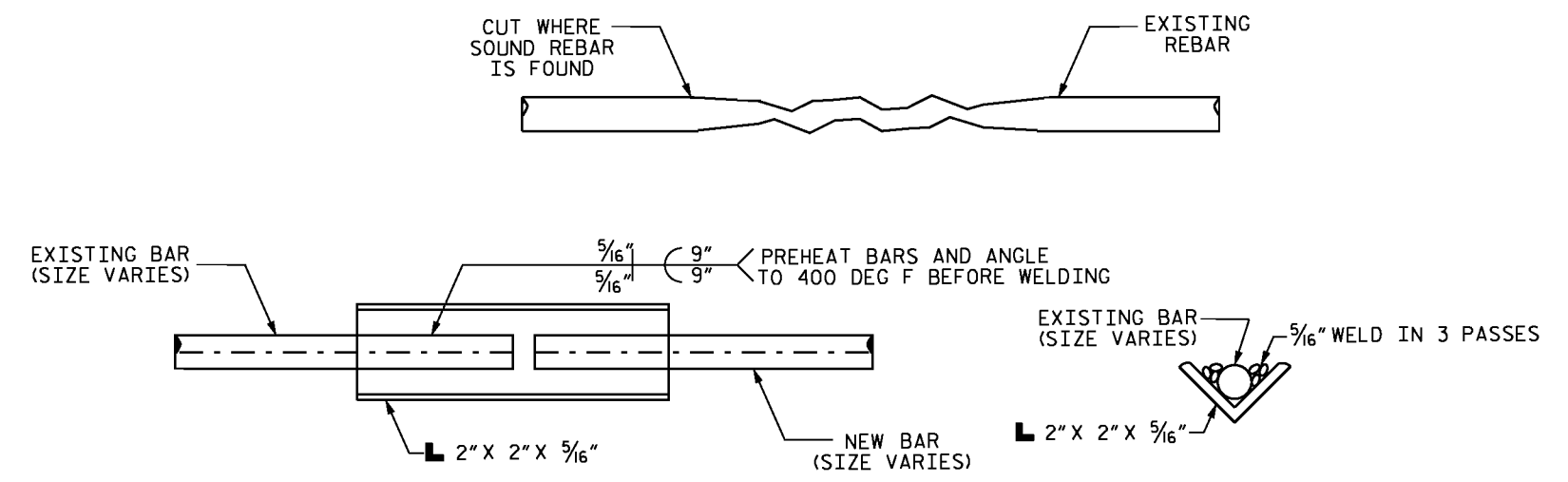
DRAWN BY : D. MULLER DATE : 7/2012  
 CHECKED BY : P. SPROUSE DATE : 7/2012

**NOTES:**

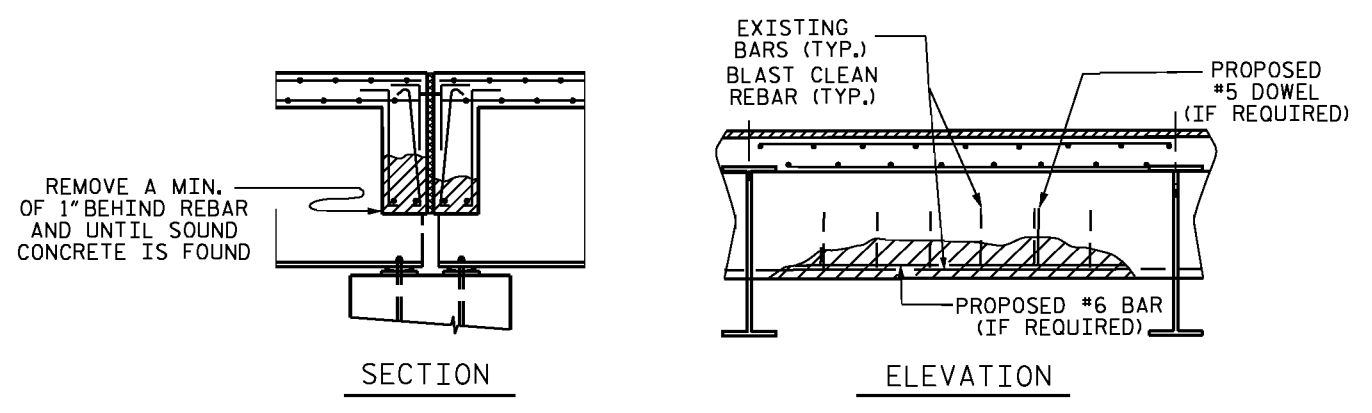
REPAIR AREAS ARE APPROXIMATE  
 PROPOSED MATERIALS AND METHODS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK.  
 FOR SHOTCRETE & CONCRETE REPAIRS REFER TO SPECIAL PROVISIONS  
 DAMAGED REBAR TO BE REMOVED AND REPLACED SEE "SPlice DETAILS" AND SPECIAL PROVISIONS FOR SHOTCRETE AND CONCRETE REPAIRS.



CONCRETE CAP REPAIR DETAIL



SPlice DETAIL  
(IF REQUIRED)



TYPICAL SHOTCRETE DIAPHRAGM REPAIR DETAIL

PROJECT NO. 17BP.2.P.12  
BEAUFORT COUNTY  
 BRIDGE NO. 25  
 SHEET      OF     

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
CONCRETE REPAIR DETAILS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-12
					TOTAL SHEETS 12

NOT TO SCALE

DRAWN BY: D. MULLER      DATE: 07/12  
 CHECKED BY: P. SPROUSE      DATE: 07/12

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

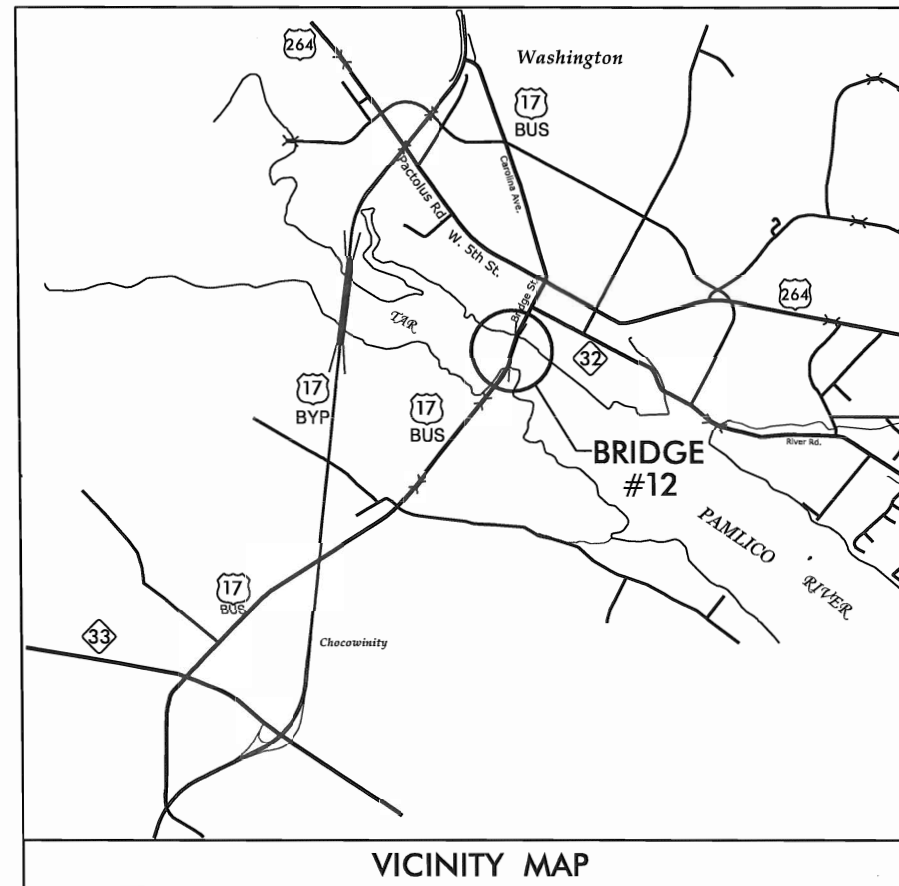
**TRANSPORTATION MANAGEMENT PLAN**

**BEAUFORT COUNTY**

**DIVISION 2**



**BRIDGE #25 – US 17 Business over Tar/Pamlico River**



VICINITY MAP

SHEET NO.

TMP-1

**INDEX OF SHEETS**

SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-1A	LEGEND AND LIST OF ROADWAY STANDARD DRAWINGS
TMP-2	GENERAL NOTES & PHASING
TMP-3	BRIDGE CLOSURE & DETOUR ROUTE OVERVIEW MAP
TMP-4	NC 33/US 17 BUS SIGNING DURING BRIDGE CLOSURE
TMP-5	BRAGAW LN./US 17 BUS SIGNING DURING BRIDGE CLOSURE
TMP-6	NC 33/US 17 BYP SIGNING DURING BRIDGE CLOSURE
TMP-7	WHICHARDS BEACH RD./US 17 BUS SIGNING DURING BRIDGE CLOSURE
TMP-8	US 17 BUS NB ROAD CLOSURE AT BRIDGE
TMP-9	US 17 BUS SB ROAD CLOSURE AT BRIDGE
TMP-10	US 264/US 17 BUS SIGNING DURING BRIDGE CLOSURE
TMP-11	US 264/US 17 BYP SIGNING DURING BRIDGE CLOSURE

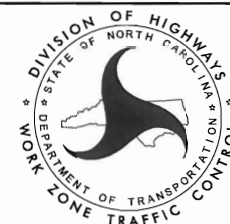
**TRAFFIC MANAGEMENT STRATEGY**

PROPOSED BRIDGE WORK WILL BE PERFORMED USING TIME RESTRICTED LANE CLOSURES AND A TIME RESTRICTED ROAD CLOSURE. REFER TO SHEET TMP-2 FOR PHASING.

7/30/2012 I:\TrafficControl\WBS 17BP.2.P.12 Beaufort 25\TCP\Plan Sheets\WBS 17BP.2.P.12.TC.TMP\_01.TITLE.dgn okarageorge



PLAN PREPARED FOR NCDOT STRUCTURES MANAGEMENT UNIT  
RALEIGH, NC



PLAN PREPARED BY:  
Stantec Consulting Services Inc.  
801 Jones Franklin Road-Suite 300  
Raleigh, NC 27606  
Tel. 919.851.6866  
Fax. 919.851.7024  
www.stantec.com

BETSY L. WATSON, P.E.  
GEORGE KARAGEORGE

TRAFFIC ENGINEER  
SR. TRANSPORTATION DESIGNER

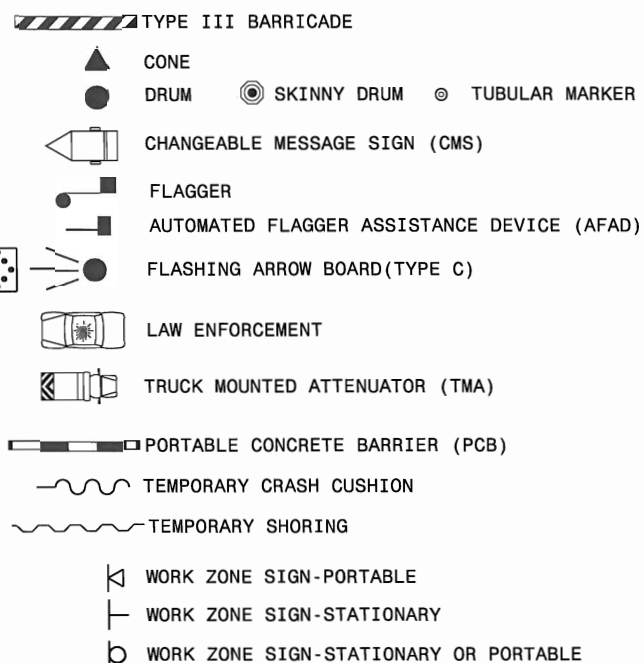
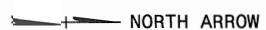
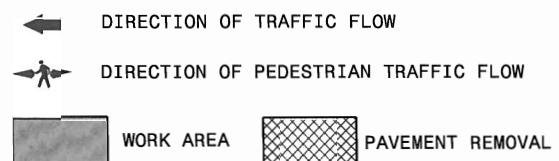
APPROVED: *Betsy L. Watson*  
DATE: 7/30/12

SEAL



**WBS 17BP.2.P.12**

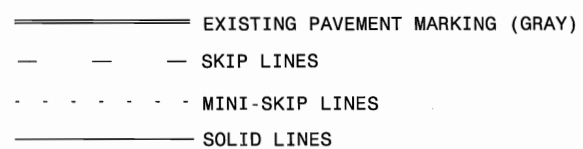
## LEGEND



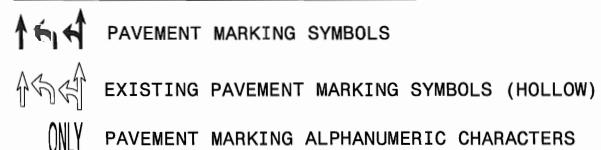
### SIGNALS



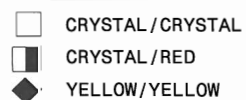
### PAVEMENT MARKINGS



### PAVEMENT MARKING SYMBOLS



### PAVEMENT MARKERS



## ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1145.01	BARRICADES
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION

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 801 Jones Franklin Road  
 Suite 300  
 Raleigh, NC 27606  
 Tel. (919) 851-8866  
 Fax. (919) 851-7024  
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APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

LEGEND  
&  
ROADWAY STANDARD DRAWINGS

# GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRABLE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

### LANE CLOSURE TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES ON US 17 BUSINESS AS FOLLOWS:

### DAY AND TIME LANE CLOSURE RESTRICTIONS

#### FROM MARCH 1 THRU OCTOBER 15

6:00 A.M.-9:00 A.M. & 4:00 P.M.-7:00 P.M. MONDAY-THURSDAY AND  
6:00 A.M. FRIDAY - 7:00 P.M. SUNDAY

#### FROM OCTOBER 16 THRU FEBRUARY 28

6:00 A.M. FRIDAY - 7:00 P.M. SUNDAY

B) DO NOT CLOSE OR NARROW A LANE OF TRAFFIC, DETAIN AND/OR ALTER THE TRAFFIC FLOW ON OR DURING HOLIDAYS, HOLIDAY WEEKENDS, OR ANY OTHER TIME WHEN TRAFFIC IS UNUSUALLY HEAVY, INCLUDING THE FOLLOWING SCHEDULES:

ROAD NAME  
US 17 BUSINESS

### HOLIDAY & HOLIDAY WEEKEND LANE CLOSURE TIME RESTRICTIONS

- 1) FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2) FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31ST TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
- 3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
- 4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
- 5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY. IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY; THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- 6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
- 7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
- 8) FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT CLOSE US 17 BUSINESS DURING THE FOLLOWING TIMES:

ONE ROAD CLOSURE PERIOD OF SEVEN (7) CONSECUTIVE CALENDAR DAYS WILL BE ALLOWED IN ORDER TO PERFORM REPAIRS TO THE SUPERSTRUCTURE AND SUBSTRUCTURE AT BENT #21. THE ROAD CLOSURE SHALL ADHERE TO THE FOLLOWING DAY AND TIME RESTRICTIONS:

### US 17 BUSINESS DAY AND TIME ROAD CLOSURE RESTRICTIONS

DO NOT CLOSE US 17 BUSINESS BRIDGE #25 FROM 6:00 A.M. THE FRIDAY BEFORE MEMORIAL DAY TO 11:00 P.M. THE TUESDAY AFTER LABOR DAY.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) LANE CLOSURES ARE REQUIRED WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN ANY PORTION OF A TRAVEL LANE. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- E) INSTALL ALL LANE CLOSURES ACCORDING TO THE PLANS, ROADWAY STANDARD DRAWINGS (1101.02), OR AS DIRECTED BY THE ENGINEER.
- F) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER. COVER OR LAY DOWN SIGNS, AND TURN OFF ARROW BOARDS AND MESSAGE BOARDS.
- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

### ROAD CLOSURES


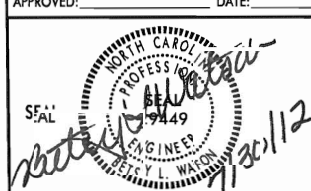
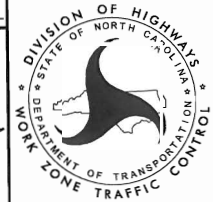

- I) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY ROAD CLOSURE.
  - J) FURNISH AND INSTALL SIGNING AND DEVICES FOR ROAD CLOSURES ACCORDING TO THE TRAFFIC MANAGEMENT PLAN. COVER OR REMOVE ALL SIGNS AND DEVICES FOR ROAD CLOSURES WHEN NOT IN EFFECT.
  - K) FURNISH AND INSTALL OFFSITE-DETOUR ROUTE SIGNING AS SHOWN IN THE TRAFFIC MANAGEMENT PLAN. COVER OR REMOVE OFFSITE-DETOUR SIGNING WHEN THE DETOUR IS NOT IN OPERATION, UNLESS OTHERWISE ALLOWED BY THE ENGINEER. ALL DETOUR ROUTES MUST BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTING.
  - L) WHEN CLOSING A ROADWAY OR DRIVEWAY PLACE TYPE III BARRICADES COMPLETELY ACROSS THE ROADWAY OR FROM CURB TO CURB. ATTACH BARRICADE MOUNTED "ROAD CLOSED" SIGN R11-2 AT ALL CLOSURE LOCATIONS. IF LOCAL TRAFFIC IS TO BE MAINTAINED STAGGER THE BARRICADES TO ALLOW ACCESS.
  - M) INSTALL SIGNS BEFORE BARRICADES WHEN CLOSING A ROADWAY TO TRAFFIC. REMOVE BARRICADES BEFORE SIGNS WHEN OPENING A ROADWAY TO TRAFFIC. INSTALL/REMOVE ROAD CLOSURE SIGNS AND BARRICADES IN A CONTINUOUS OPERATION AND WITHIN THE SAME CALENDAR DAY.
- MISCELLANEOUS**
- N) ALL DIMENSIONS AND STATIONS IN THE TRANSPORTATION MANAGEMENT PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
  - O) CHANGEABLE MESSAGE SIGN MESSAGES SHOWN ARE EXAMPLES. OTHER MESSAGES MAY BE USED AS CONDITIONS WARRANT. ALL MESSAGES AND LOCATIONS MUST BE APPROVED BY THE ENGINEER PRIOR TO INCORPORATING.
  - P) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.

# PHASING

FOR LANE CLOSURES REFER TO ROADWAY STANDARD DRAWING 1101.02, SHEET 4. DO NOT INSTALL SIMULTANEOUS LANE CLOSURES ON BOTH SIDES OF US 17 BUSINESS, UNLESS ALLOWED BY THE ENGINEER.

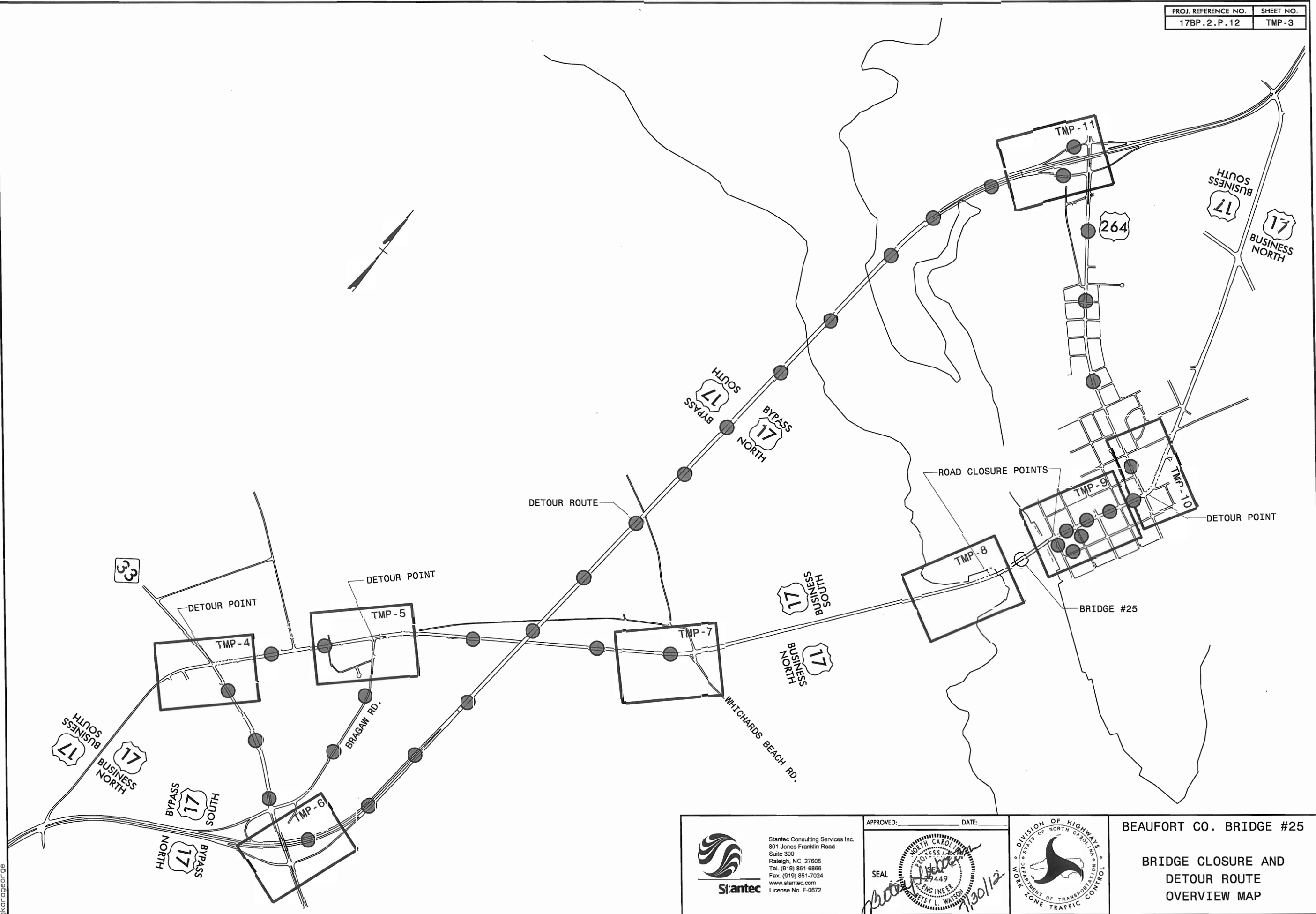
FOR ROAD CLOSURE AND OFF-SITE DETOUR FOR BRIDGE #25 REFER TO SHEETS TMP 3-11.


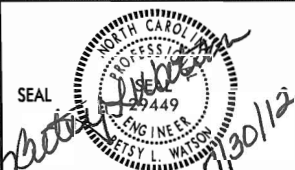

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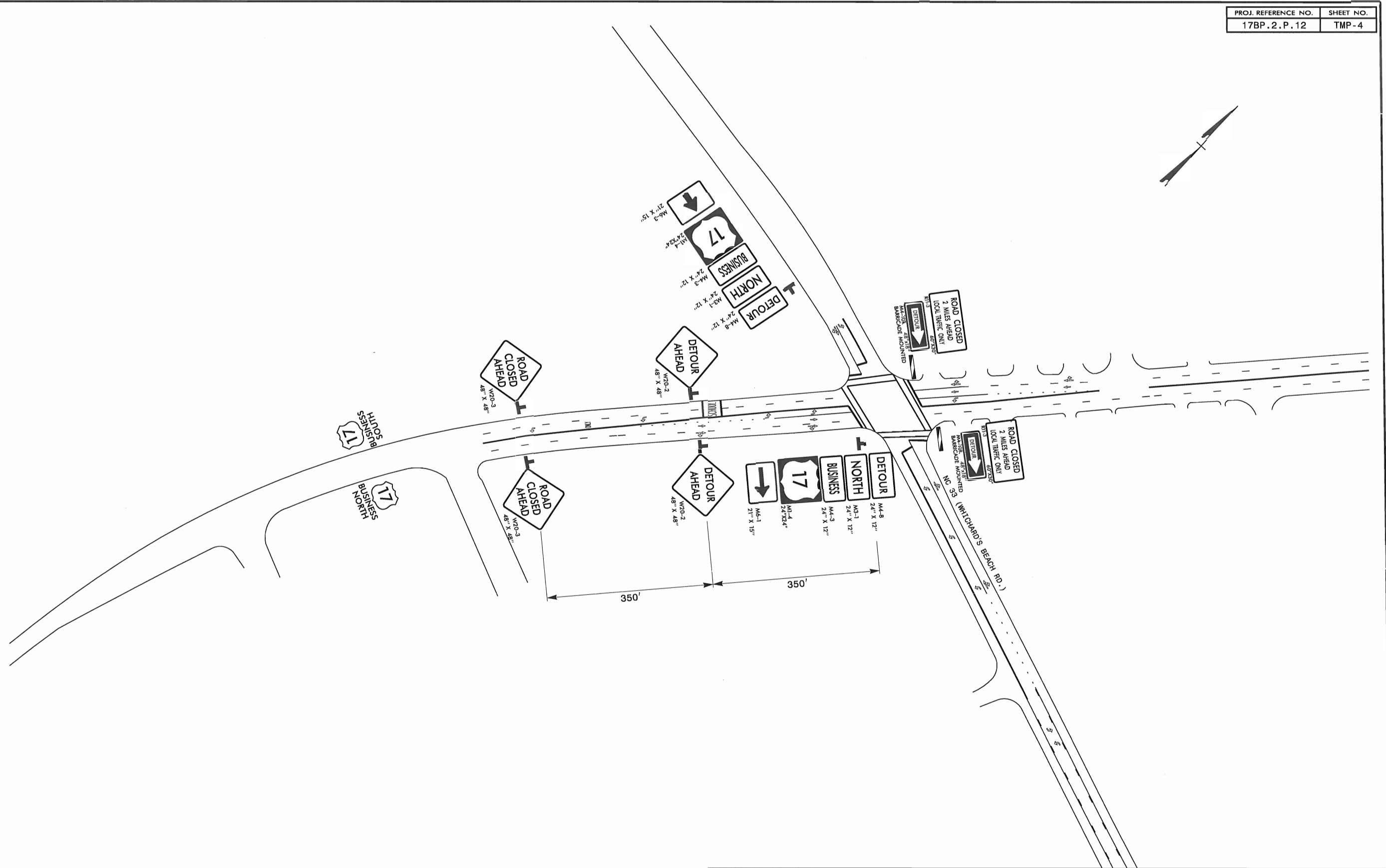



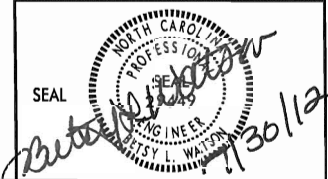

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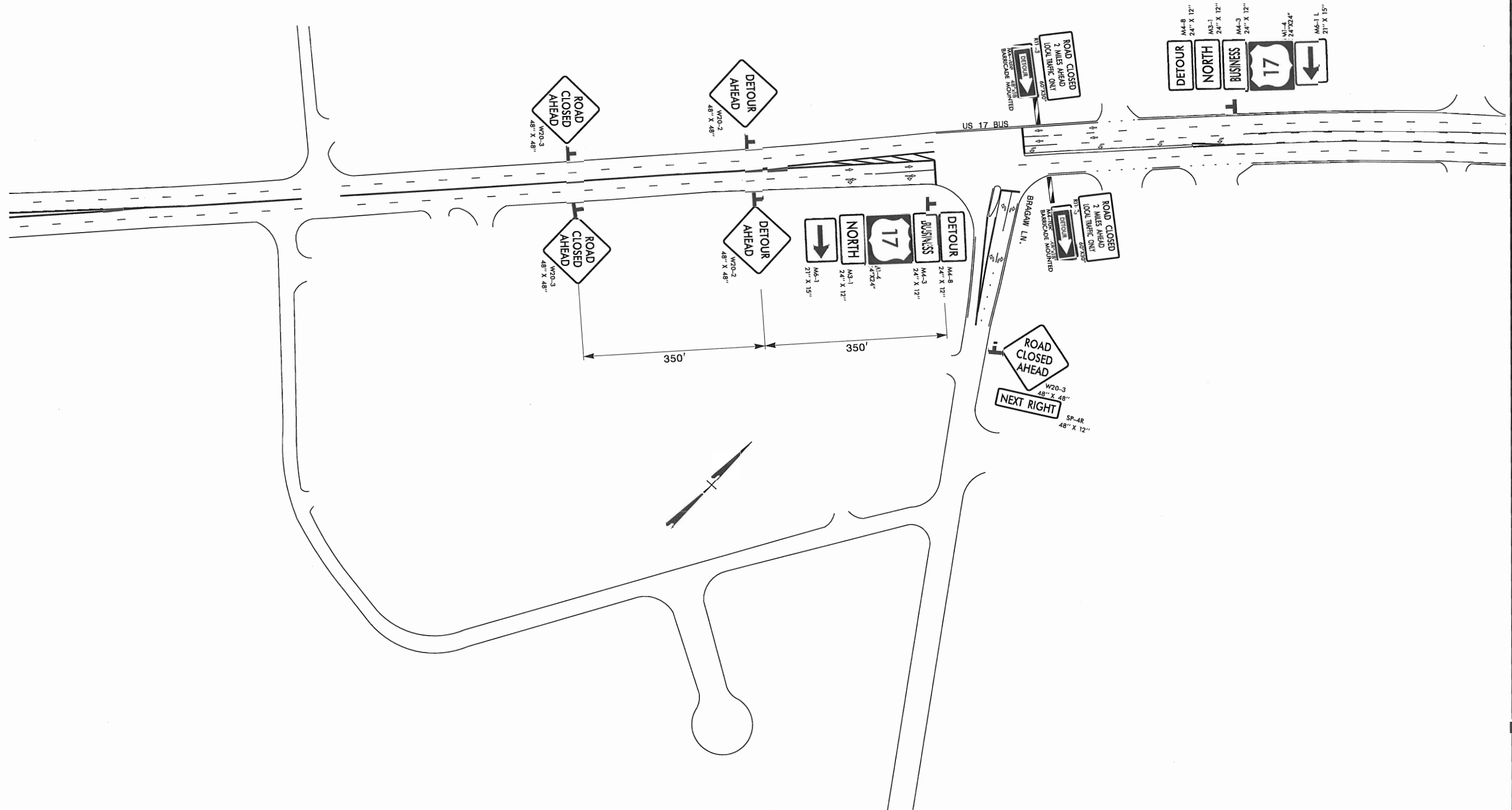


 <p>Stantec Consulting Services Inc.        801 Jones Franklin Road        Suite 300        Raleigh, NC 27606        Tel. (919) 851-6866        Fax. (919) 851-7024        www.stantec.com        License No. F-0672</p>	APPROVED: _____ DATE: _____ 		<b>BEAUFORT CO. BRIDGE #25</b>  <b>BRIDGE CLOSURE AND</b> <b>DETOUR ROUTE</b> <b>OVERVIEW MAP</b>
	SEAL: <i>M. Watson</i> 7/30/12		


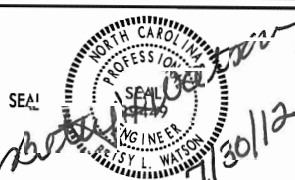

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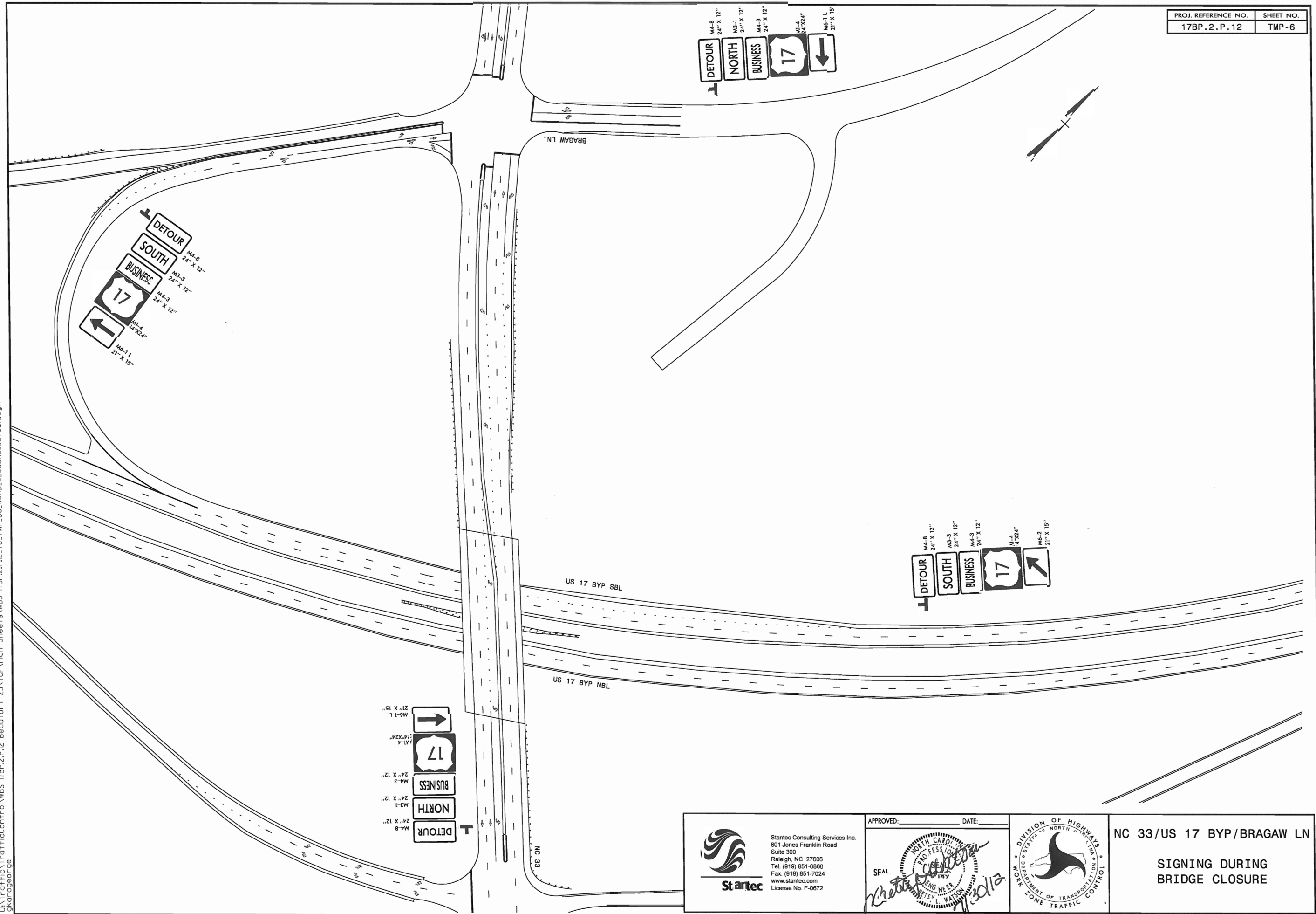
 <p>Stantec Consulting Services Inc.        801 Jones Franklin Road        Suite 300        Raleigh, NC 27606        Tel. (919) 851-6866        Fax. (919) 851-7024        www.stantec.com        License No. F-0672</p>	APPROVED: _____ DATE: _____ 		NC 33/US 17 BUS  SIGNING DURING BRIDGE CLOSURE
	SEAL		




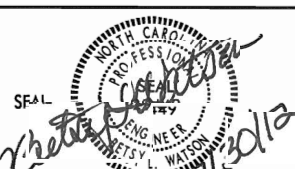
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 gkr@gborge.com

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	SEALED LESLY L. WATSON 7/30/12		

7/30/2012  
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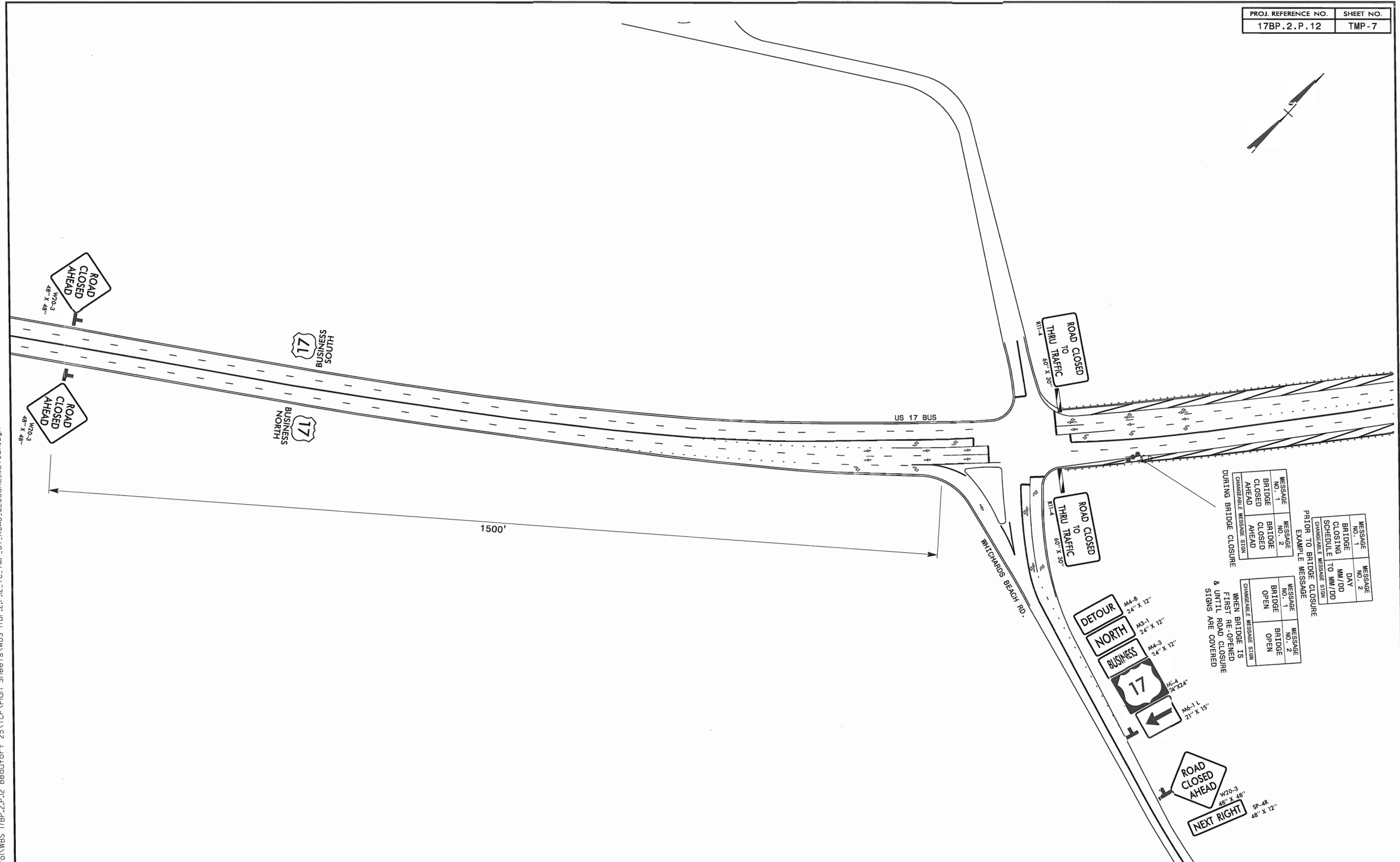



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APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  




**NC 33/US 17 BYP/BRAGAW LN**  
**SIGNING DURING BRIDGE CLOSURE**



7/30/2012  
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 gkaragorog

EXAMPLE MESSAGE SCHEDULE TO BRIDGE CLOSURE

MESSAGE NO.	DAY	MESSAGE
NO. 1	NM/DD	BRIDGE CLOSING SCHEDULE TO NM/DD
NO. 2	NM/DD	BRIDGE OPEN

EXAMPLE MESSAGE SCHEDULE TO BRIDGE CLOSURE

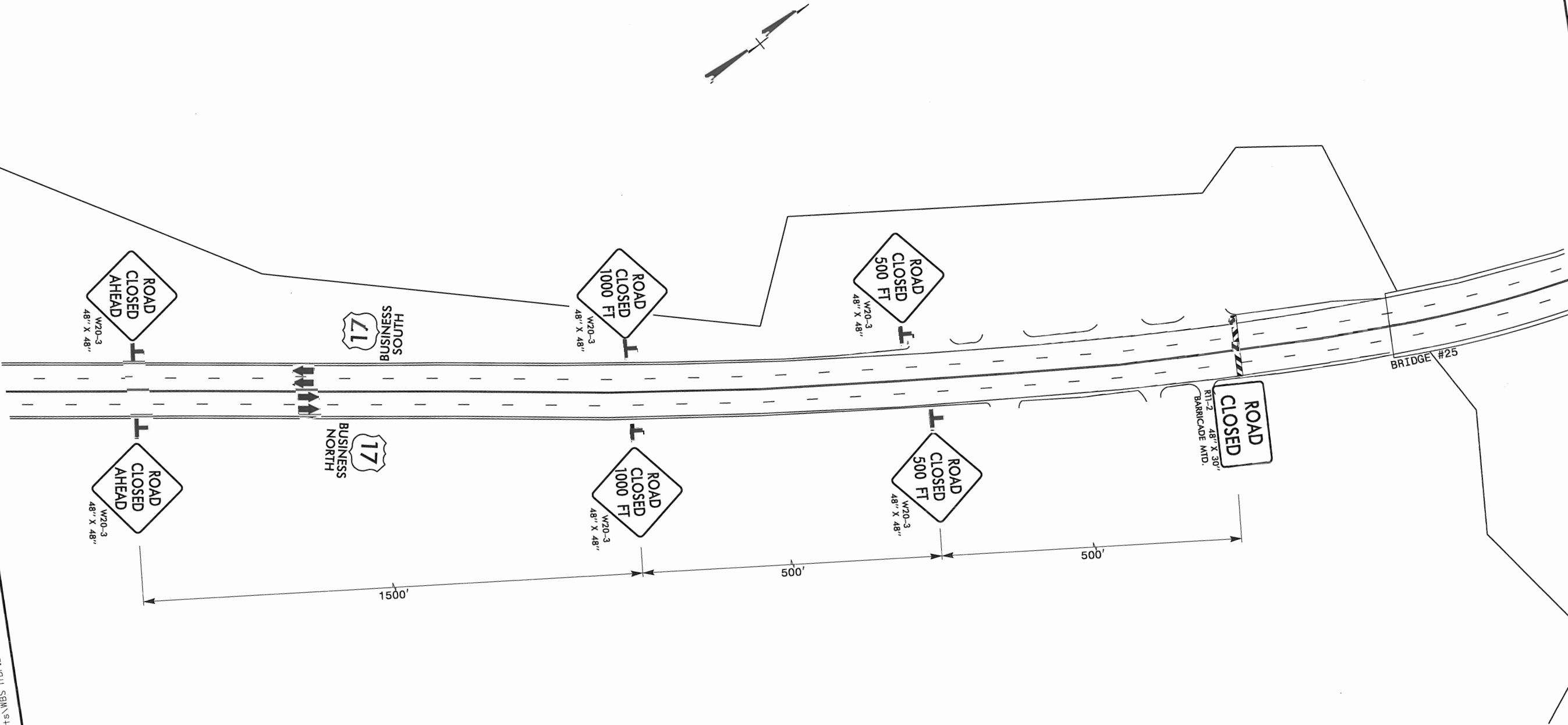
MESSAGE NO.	BRIDGE	MESSAGE
NO. 1	CLOSED	BRIDGE CLOSED AHEAD
NO. 2	OPEN	BRIDGE OPEN

EXAMPLE MESSAGE SCHEDULE TO BRIDGE CLOSURE

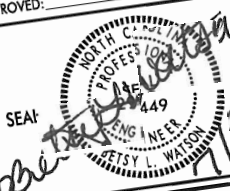
MESSAGE NO.	BRIDGE	MESSAGE
NO. 1	CLOSED	BRIDGE CLOSED AHEAD
NO. 2	OPEN	BRIDGE OPEN

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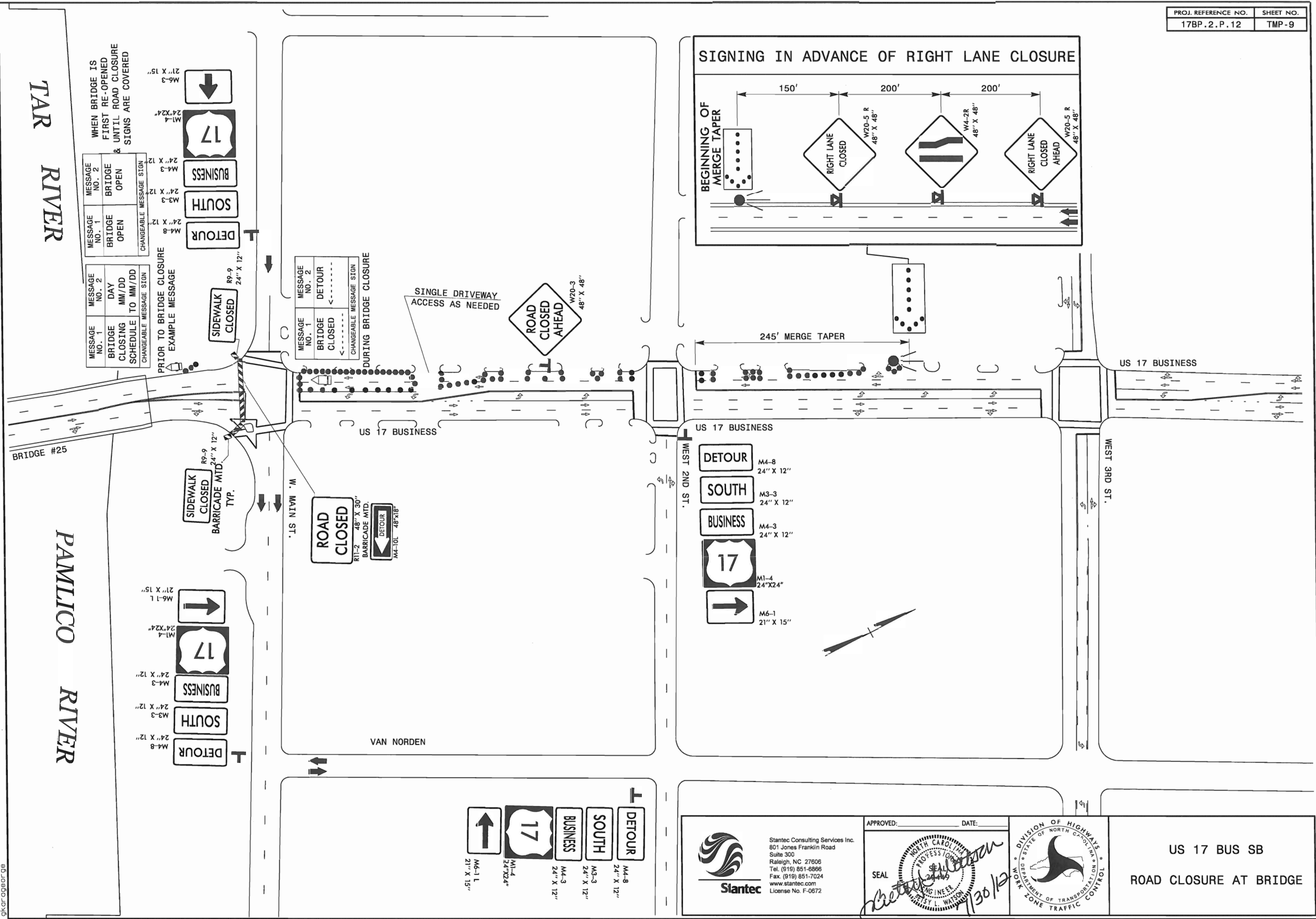
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SEA: 



US 17 BUS NB  
ROAD CLOSURE AT BRIDGE

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APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SEAL: *[Signature]*  
 PROFESSIONAL ENGINEER  
 PE # 13012



**US 17 BUS SB  
ROAD CLOSURE AT BRIDGE**

7/30/2012  
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MESSAGE NO. 1	MESSAGE NO. 2
17 BUS S	17 BYP
USE	1 MILE
17 BYP S	AHEAD
CHANGEABLE MESSAGE SIGN	

DURING BRIDGE CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
BRIDGE	BRIDGE
CLOSING	CLOSING
SCHEDULE TO MM/DD	MM/DD
DAY	DAY
CHANGEABLE MESSAGE SIGN	

PRIOR TO BRIDGE CLOSURE  
EXAMPLE MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
BRIDGE	BRIDGE
OPEN	OPEN
UNTIL ROAD	UNTIL ROAD
RE-OPENED	RE-OPENED
WHEN STINGS	WHEN STINGS
ARE COVERED	ARE COVERED
CHANGEABLE MESSAGE SIGN	

WHEN BRIDGE IS  
RE-OPENED  
& UNTIL ROAD  
CLOSURE  
STINGS ARE COVERED

MESSAGE NO. 1	MESSAGE NO. 2
17 BUS S	DAY
BRIDGE	MM/DD
CLOSING	TO MM/DD
CHANGEABLE MESSAGE SIGN	

DURING BRIDGE CLOSURE  
EXAMPLE MESSAGE

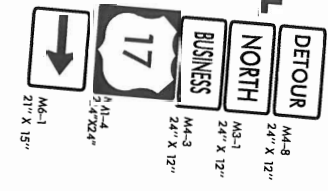
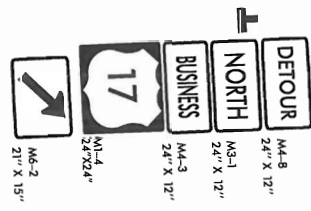
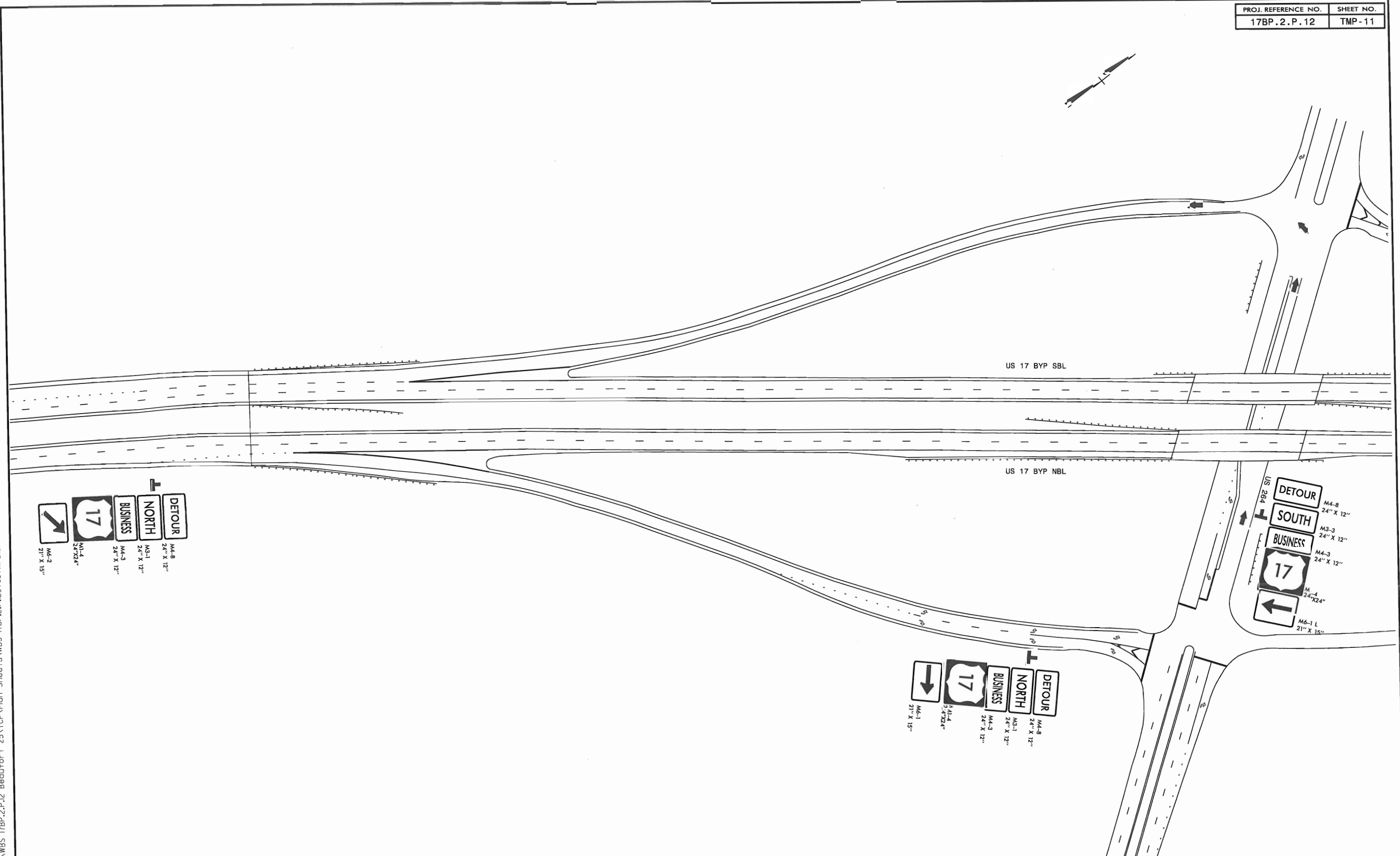
MESSAGE NO. 1	MESSAGE NO. 2
17 BUS S	17 BUS S
BRIDGE	BRIDGE
CLOSED	KEEP
STRAIGHT	STRAIGHT
CHANGEABLE MESSAGE SIGN	




DURING BRIDGE CLOSURE

<p>Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	APPROVED: _____ DATE: _____ 	<p>DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL</p>	<p>US 264/US 17 BUS SIGNING DURING BRIDGE CLOSURE</p>



7/30/2012  
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 <p>Stantec Consulting Services Inc.        801 Jones Franklin Road        Suite 300        Raleigh, NC 27606        Tel. (919) 851-6866        Fax. (919) 851-7024        www.stantec.com        License No. F-0672</p>	APPROVED: _____ DATE: _____ 	 <p>DIVISION OF HIGHWAYS        NORTH CAROLINA        DEPARTMENT OF TRANSPORTATION        OK ZONE TRAFFIC CONTROL</p>	<p>US 264/US 17 BYP          SIGNING DURING          BRIDGE CLOSURE</p>
	<p>7/30/12</p>		